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FLOOD INSURANCE STUDY

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FAIRFIELD COUNTY, OHIO

UNINCORPORATED AREAS

APRIL 17, 1989

Federal Emergency Management Agency

COMMUNITY NUMBER - 390158

NOTICE TO FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

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Flood Boundary and Floodway Map

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Flood Insurance Rate Map

FLOOD INSURANCE STUDY

FAIRFIELD COUNTY,
UNINCORPORATED AREAS,
OHIO

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the Unincorporated Areas of Fairfield County, Ohio, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the state (or other jurisdictional agency) will be able to explain them.

This Flood Insurance Study was prepared by compiling existing hydrologic and hydraulic technical and scientific data prepared by the Federal Emergency Management Agency (FEMA) for purposes of the National Flood Insurance Program and by other organizations for purposes other than the National Flood Insurance Program. The data were identified as applicable at the time of compilation of this Flood Insurance Study and should depict the general conditions of the flooding sources with relative accuracy. FEMA performed a cursory review and accepted the data as valid for purposes of this Flood Insurance Study and the National Flood Insurance Program. However, if better information is known to exist or has been developed since the date of this report, the information should be immediately forwarded to the Natural and Technological Hazards Division, FEMA, Chicago, Illinois, for consideration for revision of this study.

1.2 Authority and Acknowledgements

The sources of authority for this Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for the Hocking River, Pleasant Run, Fetters Run, Ewing Run, Blue Valley Lateral, Pleasant Run Lateral, Ewing Run Lateral, and Hocking River Diversion were obtained from "Flood Hazard Analysis Report, Hocking River, Fairfield County, Ohio" (Reference

1). Hydrologic and hydraulic analyses for the upper Hocking River, Hunters Run, Ohio Canal, Lateral A, Lateral B, Lateral C, and Lateral D were obtained from "Flood Hazard Analyses Report, Upper Hocking River, Fairfield County, Ohio" (Reference 2). Hydrologic and hydraulic analyses for Rush Creek, Tributary A, Tributary B, Turkey Run, Raccoon Run, Tributary I, Little Rush Creek, and Tributary H were obtained from "Flood Hazard Study, Rush Creek, Fairfield, Hocking, and Perry Counties, Ohio" (Reference 3). Hydrologic and hydraulic analyses for Walnut Creek, Poplar Creek, Pawpaw Creek, Pawpaw Creek Tributary, Baltimore Tributary, and Little Walnut Creek were obtained from "Flood Plain Management Study, Walnut Creek, Fairfield County, Ohio" (Reference 4). The hydrologic and hydraulic analyses for the South Fork Licking River were obtained from the Flood Insurance Study for Licking County, Ohio (Reference 5). The "Flood Hazard Analyses Report, Blacklick Creek, Ohio" and the "Flood Plain Information Study, Sycamore Creek, Fairfield County, Ohio" (References 6 and 7) were also used in this study.

1.3 Coordination

On May 4, 1988, the results of this Flood Insurance Study were reviewed and accepted at a final coordination meeting attended by representatives of the community and FEMA.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the unincorporated areas of Fairfield County, Ohio. The area of study is shown on the Vicinity Map (Figure 1). The incorporated areas within the county were excluded from this study.

The areas studied by detailed methods were selected based upon the extent and validity of available existing hydrologic and hydraulic data.

The following streams were studied by detailed methods:

a. The Hocking River, from the southern county boundary to about 1.9 miles upstream of Campground Road;

b. Hocking River Diversion, from its confluence with the Hocking River to about 5,000 feet upstream;

c. The South Fork Licking River, within the county boundary;

d. Walnut Creek, from the western county boundary to about 1,500 feet upstream of State Route 256;

e. Little Walnut Creek, from the confluence with Walnut Creek to about 2,000 feet upstream of State Route 188;

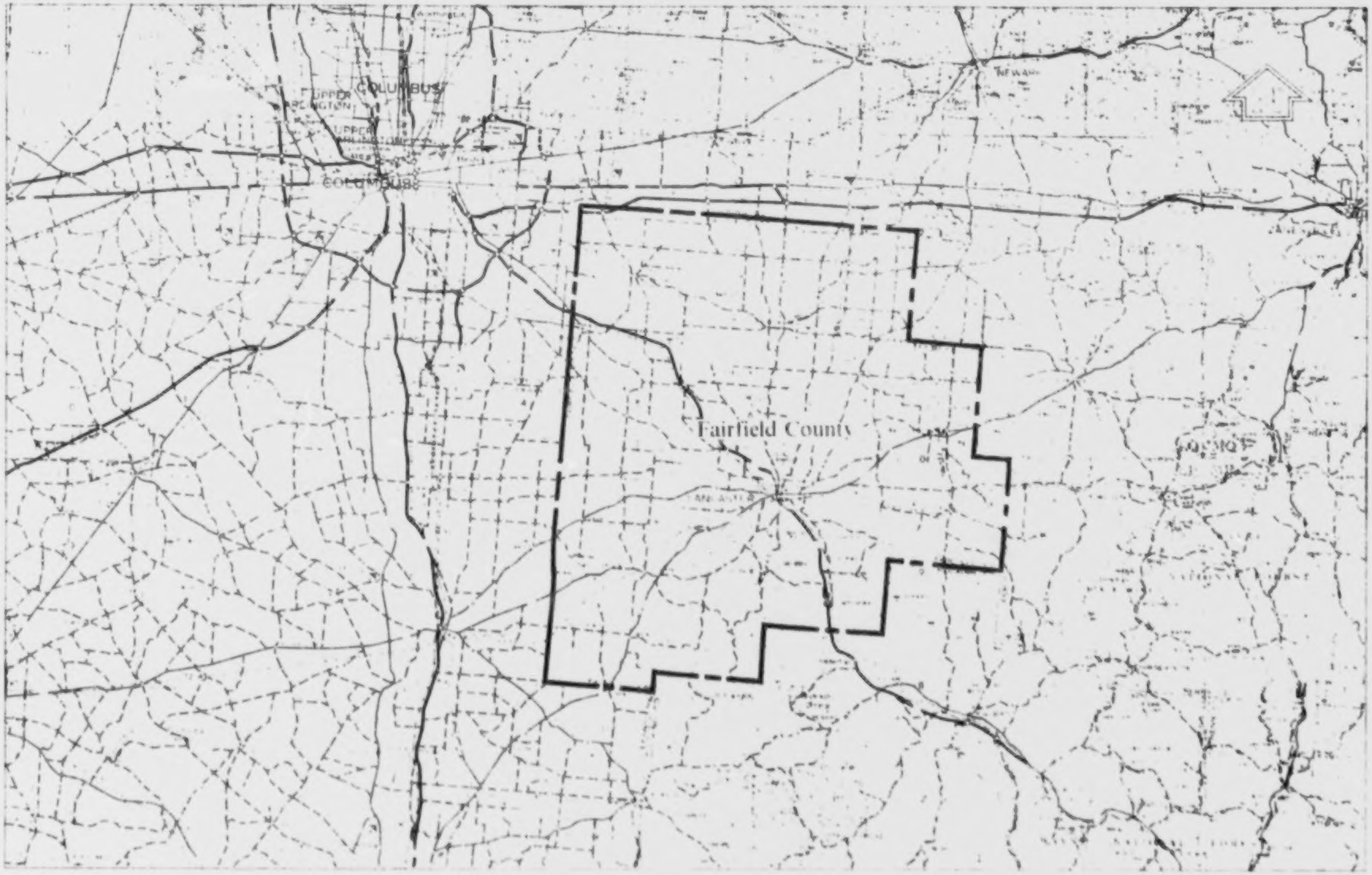
COLUMBUS
COLUMBUS
Fairfield County

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

APPROXIMATE SCALE

8 0 8 16 24 MILES

VICINITY MAP

f. Poplar Creek, from its confluence with Walnut Creek to about 2,400 feet upstream of third Poplar Creek Road crossing;

g. Pawpaw Creek, from the Village of Baltimore corporate limits to about 2,300 feet upstream of confluence of Pawpaw Creek Tributary;

h. Pawpaw Creek Tributary, from its confluence with Pawpaw Creek to about 500 feet upstream of mouth;

i. Little Rush Creek, from its confluence with Rush Creek to about 1.1 miles above the upstream State Route 664 crossing;

j. Tributary A, from its confluence with Rush Creek to about 1,600 feet upstream of Carpenter Road;

k. Tributary B, from its confluence with Rush Creek to Paradise Road;

l. Baltimore Tributary, from the Conrail crossing to Roley Road;

m. Raccoon Run, from its confluence with Rush Creek to State Route 37;

n. Turkey Run, from its mouth to about 2,700 feet upstream of Bethel Road;

o. Tributary H, from its confluence with Little Rush Creek to Lake Road;

p. Tributary I, from its confluence with Raccoon Run to State Route 37;

q. Hunters Run, from U.S. Route 22 at the City of Lancaster corporate limits to about 4,600 feet upstream of Delmont Road;

r. Pleasant Run, from its confluence with the Hocking River to State Route 188;

s. Pleasant Run Lateral, from its confluence with Pleasant Run to Duffy Road;

t. Ewing Run, from its confluence with Baldwin Run to about 4,100 feet upstream of Rainbow Drive;

u. Fetters Run, from its confluence with Baldwin Run to about 3,400 feet upstream of Rainbow Drive;

v. Ohio Canal, from the CSX railroad bridge to just upstream of the confluence of Lateral A;

w. Lateral A, from its confluence with the Ohio Canal to about 200 feet upstream of Farm Lane;

x. Lateral B, from its confluence with the Ohio Canal to about 1,700 feet upstream of Farm Lane;

y. Lateral C, from its confluence with the Ohio Canal to about 6,100 feet upstream of U.S. Route 33;

z. Lateral D, from the City of Lancaster corporate limits to about 1,400 feet upstream of Farm Lane;

aa. Blue Valley Lateral, from its confluence with the Hocking River to about 4,500 feet upstream of Farm Lane; and

ab. Rush Creek, within the county boundary.

ac. Blacklick Creek, within the county boundary.

Approximate methods of analysis were used to study all remaining areas having a potential flood hazard that did not have detailed scientific or technical data available.

The primary flooding sources studied by approximate methods include Sycamore Creek and Lateral H.

2.2 Community Description

Fairfield County is in central Ohio and is bordered on the north by Franklin and Licking Counties, the City of Reynoldsburg, and the Village of Buckeye Lake; on the east by Perry County; on the south by Pickaway and Hocking Counties; and on the west by Pickaway and Franklin Counties, the City of Columbus, and the Village of Canal Winchester. The population of Fairfield County was reported to be 93,678 (Reference 8). The City of Lancaster, located about 30 miles southeast of Columbus, Ohio, is the county seat of Fairfield County. U.S. Routes 33 and 22 are the major roads serving the county. Conrail and the CSX railroad also operate within the county.

The study area is almost entirely within the Allegheny Plateau. The rock units present are primarily sandstone and shale, with a regional dip of 20 to 30 feet per mile to the southeast. All of the geologic formations present are of the Mississippian era. The oldest is the Cuyahoga Formation, consisting of fine-grained sandstone and siltstone with thin beds of shale. It occurs throughout the northern half of the area and is exposed in the Hocking Valley. The Black Hand formation is a coarse-grained sandstone and conglomerate member that occurs within the Upper Cuyahoga Formation. It is resistant to erosion and forms steep slopes in the area. The youngest formation present is the Logan Formation, a fine-grained sandstone that is present only on the ridge tops in the southern and eastern portions of the county.

After deposition, periods of uplift, slight deformation, erosion, and glaciation occurred. During the Pleistocene Epoch, deposits of glacial till, sand, and outwash were laid down by the retreating Illinoian glacier. Thick deposits of till and outwash were also left behind as the second glacial formation, the Wisconsin glacier, melted and retreated northward. Since glacial times, the drainage in the area has occupied preglacial channels as well as carving new channels in the glacial deposits. The streams have also deposited alluvium in the low-lying areas of the floodplain. The U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS), published a soil survey of Fairfield County that delineates and describes the soils in the county (Reference 9).

The climate of both the Hocking and Upper Hocking Watersheds is classified as humid with warm summers and mildly cold winters typical of the northern temperate zone. Precipitation is distributed quite evenly throughout the year. The mean annual precipitation in the area is 40.75 inches (Reference 10).

For the most part, the streams studied are formed in alluvium material with the extreme upper ends of some of the laterals formed in till. The stream channel side slopes of the Hocking River consist of alluvium and are quite unstable; usually some sloughing or erosion damage occurs during sustained periods of full bank flow. The side laterals entering the Hocking River downstream of Lancaster are steep and produce rather high peak flows.

The highest elevation in the watershed is approximately 1,190 feet National Geodetic Vertical Datum of 1929 (NGVD) in the northwestern portion of the watershed in Bloom Township, with the lowest point being about 825 feet NGVD at the point where Hunters Run leaves the watershed. This is about 365 feet of relief in the watershed.

The bedrock of the watershed consists of coarse sandstone and conglomerate, covered by glacial till and outwash gravels deposited during the last glacial age. The soils occurring on the uplands are primarily light-colored Alexandria, Cardington, and Bennington silt loams. They are nearly level to sloping, moderately productive soils with slow infiltration and rapid runoff rates.

In the study area, the lower reaches of the Hocking River and Hunters Run have very broad, nearly level floodplains adjacent to nearly level glacial outwash terraces. These low-lying areas are subject to frequent flood damage.

The areas of the Hocking River watershed that are included in this study are the portions that lie to the northwest and south of the City of Lancaster. Floodplain areas to the north of Lancaster are being developed primarily for residential use and those areas to the south are primarily agricultural with an occasional residence or industry present. The primary industry in the floodplain south of Lancaster, other than agriculture, is surface mining of aggregate.

The Rush Creek watershed is in southeastern Fairfield County, southwestern Perry County, and a small portion of northern Hocking County. The topography of the watershed is moderately steep in the southern and eastern portions to rolling in the western and northern portions. Elevations range from about 770 feet NGVD at the mouth of Rush Creek at the Hocking River to about 1,140 feet NGVD along the southeastern watershed divide. Soils that dominate the higher elevations along the eastern and southern perimeter and the central portion of the watershed were formed in Illinoian-age till, or they are residual soils formed in generally acid siltstone, shale, or sandstone. Soils on the floodplains along the major streams were formed in water-deposited sediments. Most of the soils on the floodplain and terraces are fertile and are well suited for farming.

Land use in the Rush Creek watershed is 36.4 percent cropland, 18.2 percent pastureland, 21.4 percent forest land, and 24 percent other uses. Land use in the floodplain is 68 percent cropland, 7 percent pastureland, 11 percent forest land, and 14 percent other uses.

The Walnut Creek watershed, which is located in northern Fairfield County, is predominantly agricultural in nature; however, significant suburban residential development has taken place in recent years. This development is mainly in the northwestern portion of the watershed on the fringe areas of the City of Columbus.

The floodplain soils along Walnut Creek are mostly light-colored silt loam and loam soils formed in alluvial deposits. They include somewhat poorly drained Shoals, moderately well-drained Eel, and well-drained Genesee series. Dark colored, poorly drained Sloan and Montgomery soils occur in low-lying areas of the floodplain. Most floodplain soils in the watershed are well suited to agricultural purposes.

The wide, flat floodplain of the South Fork Licking River constitutes a large area of flood-prone land. Although a high percentage of this land is used for agriculture, the potential for industrial and commercial development is increasing.

2.3 Principal Flood Problems

The most frequent flooding occurs in Fairfield County during the winter and early spring.

Areas downstream of Lancaster that flood most frequently are at Horns Mill and an area near the junction of Old Logan and Tarklin Road.

In the Hocking River watershed, flooding equivalent to the 10-year flood occurred on March 4, 1963, and May 27, 1968. The floods that occurred on January 21, 1959; April 2, 1970; February 23, 1975; and July 23, 1976, are comparable to the 2-year recurrence interval. The storm on June 19, 1978, passed to the north around most of the watershed. The rain that fell in the watershed caused considerable flooding along the Ohio Canal at Hooker. Flooding in this area was comparable to the 10-year recurrence interval. Flooding from the above storms caused damage to agricultural fields, roads, and lawns.

Flooding has historically been a major water resource problem in the Rush Creek watershed. Periodic flooding damages crops, pastures, urban areas, and transportation systems. Floods causing serious, widespread damage have occurred in March 1907, March 1913, August 1935, January 1937, April 1940, June 1950, March 1963, and March 1964. In recent years, major floods of somewhat lesser magnitude were experienced in June 1958, January 1959, May 1961, and February 1975.

The storms of March 1963 and March 1964 resulted in the highest stages ever recorded in the Bremen area. The magnitude of the 1963 flood in terms of precipitation was equivalent to a 30-year frequency storm; however, the discharges approached the equivalent of a 100-year frequency. Damage in Bremen in 1963 was estimated at $500,000. About 170 head of livestock drowned on farms located south of town. In addition, it was estimated that damages to roads, railroads, and bridges amounted to $120,000.

Flood damage within the Walnut Creek watershed has primarily been to crops. The average annual flood damage for this area is estimated to be $75,000. Streambank erosion is occurring along some areas of Walnut Creek and its tributaries. Log jams and fallen trees in the channel have contributed to this problem by diverting floodflow toward the streambanks and undercutting the bank slopes.

2.4 Flood Protection Measures

The Hocking River watershed has benefited from the Upper Hocking (Pilot) Watershed Project. Construction started in 1954 on the watershed project and was completed in 1961. Eight floodwater retarding structures were installed, controlling 24.4 square miles of drainage area and providing 6,245 acre-feet of temporary flood storage. Since the installation of the reservoirs, downstream flood peaks have been reduced and are rather uniform due to the temporary flood storage provided.

In 1957, application was made for assistance under the Watershed Protection and Flood Prevention Act (Public Law 566) for the Rush Creek watershed work plan. Developed by the USDA, the plan provided for the installation of 22 reservoirs, 23 miles of channel improvement, and 1.9 miles of levees. To date, 19 flood-retarding reservoirs have been constructed, controlling 85 square miles of drainage area. In addition, the channel improvement work on Rush Creek has been completed.

The 1.9 miles of levees on Raccoon Run and Little Rush Creek around Bremen are designed as earthen levees providing 100-year protection, with three feet of freeboard, for the Village of Bremen. The channel improvements and levee on Raccoon Run were completed in 1987. The levee on Rush Creek has been completed. The depth and extent of flooding has been, and will continue to be, reduced by the installation of these flood protection measures.

No flood protection measures exist within the Walnut Creek watershed.

A watershed plan has been developed by the South Fork Licking River Watershed Conservancy District with the assistance of the USDA (Reference 11). Installation of the planned project will reduce flood elevations on South Fork Licking River. This project will include six flood-retarding dams along with a series of channel modifications when completed. A projected completion date of 3 or 4 years eliminates the plan from being considered in this study.

The Fairfield County Commissioners adopted subdivision regulations in 1973 to prevent inordinate development in the floodplains of the county. The Fairfield County Regional Planning Commission approved and adopted the same measures. Revised subdivision regulations have since been prepared for Fairfield County. The design and requirements of the Fairfield County Subdivision Regulations contain specific requirements relative to "Land Subject to Flooding" (Reference 12).

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that is expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for flood plain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (1 percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each flooding source studied in detail affecting the community.

On all streams studied in detail within the county, flood discharges were established by valley and structure flood routings computed using the SCS computer program, TR-20 (Reference 13). This program uses the convex method for stream flow and valley flood routing. Input parameters include drainage area, land use, surface slope, and rainfall.

The stream discharges of some streams decreased at certain downstream areas because of overbank storage effects. Floodwaters are detained in these overbank storage areas during peak flow conditions, thus causing lower peak stream discharges.

The Hocking River watershed was analyzed using the Hocking River Valley and Structure Flood Routing model. A hydrograph was computed at the Broad Street Bridge over the Hocking River in the City of Lancaster. This hydrograph was derived from stage-storage and reach routing calculations using routing coefficients determined on the basis of stream and valley geometry.

The model was calibrated against two storm events with uniform rainfall distributions that occurred on February 22-23, 1975, and on July 22-23, 1976. The calculated discharges from the model matched the gage information very closely. In addition, spot elevation checks made along Pleasant Run Tributary were found to match calculated elevations closely.

The Hocking River watershed hydrologic model was compared to the U.S. Geological Survey stream gage on Hunters Run (gage number 03156000) located at the U.S. Route 22 bridge and Lancaster corporate limits. The flows obtained from the TR-20 analysis matched the gage analysis given in the Ohio Department of Natural Resources (ODNR) Bulletin 45 (Reference 14). The flow values obtained from the regression equations in Bulletin 45 were found to be higher than the flow values obtained from TR-20. This was expected because the regression equations do not account for the effect of the flood-retarding structures.

The validity of the Rush Creek watershed computer model was verified during two earlier SCS studies, "Final Environmental Impact Statement, Rush Creek Watershed" and "Work Plan, Rush Creek Watershed" (References 15 and 16).

The Walnut Creek watershed model was calibrated to match the discharges at the downstream county boundary for the Flood Insurance Study for the Village of Canal Winchester, Ohio (Reference 17).

The South Fork Licking River TR-20 model discharge values were compared to and found to be somewhat lower than those obtained from the ODNR Bulletin 45 analysis (Reference 14). Due to the shape of the watershed and the width and flatness of the floodplain, lower discharge values could be expected. The TR-20 model was verified through calibration with a historical storm.

Peak discharges for the 10-, 50-, 100-, and 500-year floods of each flooding source studied in detail in the community are shown in Table 1.

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA SQ MILES	PEAK DISCHARGES (CFS) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
HOCKING RIVER					
at downstream county boundary	338.23	10,394	15,207	17,912	23,605
just downstream of confluence of Pleasant Run	85.46	8,069	10,658	11,958	14,746
upstream of Collins Road	19.94	900	1,100	1,300	1,600
HOCKING RIVER DIVERSION					
just upstream of confluence with the Hocking River	N/A	2,700	4,024	4,768	6,300
PLEASANT RUN					
at confluence with the Hocking River	17.14	2,551	3,520	4,087	5,446
FETTERS RUN					
at confluence with Baldwin Run	7.07	2,147	3,071	3,561	4,539
EWING RUN					
at confluence with Baldwin Run	5.19	2,255	3,227	3,747	4,713
BLUE VALLEY LATERAL					
at confluence with the Hocking River	6.59	1,184	1,866	2,251	3,036
PLEASANT RUN LATERAL					
at confluence with Pleasant Run	3.28	919	1,291	1,516	1,932

TABLE 1 - SUMMARY OF DISCHARGES (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA SQ MILES	PEAK DISCHARGES (CFS) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
HUNTERS RUN					
at U.S. Route 22	10.1	1,500	2,000	2,200	2,600
OHIO CANAL					
at CSX railroad	12.51	1,600	2,100	2,400	2,900
LATERAL A					
at confluence with the Ohio Canal	1.62	390	580	680	900
LATERAL B					
at confluence with the Ohio Canal	5.58	870	1,100	1,200	1,300
LATERAL C					
at confluence with the Ohio Canal	2.96	[illegible]	990	1,100	1,400
LATERAL D					
at confluence with the Hocking River	2.99	1,100	1,500	1,700	2,200
RUSH CREEK					
at confluence with the Hocking River	236.7	5,640	N/A	9,440	N/A
at confluence of Little Rush Creek	159.60	N/A	N/A	4,230	N/A

TABLE 1 - SUMMARY OF DISCHARGES (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA SQ MILES	PEAK DISCHARGES (CFS)			
		10-YEAR	50-YEAR	100-YEAR	500-YEAR
TRIBUTARY A					
at confluence with Rush Creek	3.49	1,040	1,740	1,880	2,690
TRIBUTARY B					
at confluence with Rush Creek	1.84	540	910	980	1,410
TURKEY RUN					
at mouth	11.01	1,850	3,010	3,260	4,780
RACCOON RUN					
at confluence with Rush Creek	29.10	N/A	N/A	2,030	N/A
TRIBUTARY I					
at confluence with Raccoon Run	1.72	350	590	640	930
LITTLE RUSH CREEK					
at confluence with Rush Creek	60.93	N/A	N/A	5,130	N/A
TRIBUTARY H					
at confluence with Little Rush Creek	13.63	N/A	N/A	3,480	N/A
WALNUT CREEK					
at downstream county boundary	146.15	11,330	15,770	23,390	30,980
downstream of confluence of Little Walnut Creek	39.88	4,800	6,810	9,730	12,230

TABLE 1 - SUMMARY OF DISCHARGES (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA SQ MILES	PEAK DISCHARGES (CFS) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
POPLAR CREEK					
at confluence with Walnut Creek	17.54	2,840	4,250	6,150	7,870
PAWPAW CREEK					
at confluence with Walnut Creek	16.21	2,830	4,150	5,950	7,590
PAWPAW CREEK TRIBUTARY					
at confluence with Pawpaw Creek	3.95	620	890	1,270	1,590
BALTIMORE TRIBUTARY					
at confluence with Pawpaw Creek	6.65	1,270	1,890	2,730	3,490
LITTLE WALNUT CREEK					
at confluence with Walnut Creek	10.94	2,360	3,420	4,820	6,150
SOUTH FORK LICKING RIVER					
about 4,300 feet upstream of Conrail	18.0	1,990	3,100	3,630	4,970
BLACKLICK CREEK					
at downstream county boundary	N/A	N/A	9,700	10,900	N/A

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of the floods of the selected recurrence intervals.

Cross-section data on all streams studied in detail were field surveyed by transit and stadia methods. All hydraulic structures were field surveyed.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles and on the Flood Boundary and Floodway Map.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals.

Water-surface profiles for floods of the selected recurrence intervals were determined using the SCS step-backwater computer program WSP-2 (Reference 18). Bridge head losses were calculated using methods from "Hydraulics of Bridge Waterways" (Reference 19).

Starting water-surface elevations on Walnut Creek were obtained from the Flood Insurance Study for the Village of Canal Winchester (Reference 17). Otherwise, normal-depth techniques were used to obtain starting water-surface elevations on all streams studied by detailed and approximate methods.

Channel and overbank roughness coefficients (Manning's "n") used in the hydraulic computations were chosen by engineering judgment and based on field observation of the streams and floodplain areas. The range of "n" values for each stream is shown in Table 2.

The hydraulic analyses for this study are based on the effects of unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the NGVD. Elevation reference marks used in the study are shown on the maps.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages State and local governments to adopt sound floodplain management programs. Therefore, each Flood Insurance Study produces maps designed to assist communities in developing floodplain management measures.

4.1 Flood Boundaries

To provide a national standard without regional discrimination, the 1 percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2 percent annual

TABLE 2 - Manning's "n" Values

Stream	Channel	Overbank
Hocking River	0.025 - 0.074	0.055 - 0.15
Hocking River Diversion	0.065 - 0.080	0.065 - 0.080
Pleasant Run	0.027 - 0.095	0.05 - 0.10
Fetters Run	0.029 - 0.055	0.05 - 0.08
Ewing Run	0.03 - 0.05	0.03 - 0.08
Blue Valley Lateral	0.05 - 0.072	0.055 - 0.09
Pleasant Run Lateral	0.032 - 0.10	0.065 - 0.07
Hunters Run	0.04 - 0.069	0.06 - 0.20
Ohio Canal	0.05 - 0.06	0.08 - 0.12
Lateral A	0.035 - 0.09	0.08 - 0.20
Lateral B	0.05 - 0.085	0.08 - 0.12
Lateral C	0.03 - 0.085	0.08 - 0.12
Lateral D	0.035 - 0.067	0.08 - 0.095
Rush Creek	0.035 - 0.055	0.06 - 0.12
Tributary A	0.04 - 0.065	0.06 - 0.09
Tributary B	0.062 - 0.064	0.075 - 0.11
Turkey Run	0.042 - 0.046	0.08 - 0.09
Raccoon Run	0.046 - 0.062	0.07 - 0.10
Tributary I	0.04 - 0.055	0.075 - 0.08
Little Rush Creek	0.055 - 0.06	0.06 - 0.12
Tributary H	0.037 - 0.046	0.08 - 0.085
Walnut Creek	0.037 - 0.046	0.060 - 0.095
Poplar Creek	0.041 - 0.046	0.072 - 0.092
Pawpaw Creek	0.045 - 0.049	0.075 - 0.100
Pawpaw Creek Tributary	0.050	0.080
Baltimore Tributary	0.039 - 0.050	0.060 - 0.100
Little Walnut Creek	0.035 - 0.046	0.060 - 0.90
South Fork Licking River	0.030 - 0.070	0.072 - 0.120
Blacklick Creek	0.070	0.105

chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the 100- and 500-year floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections the boundaries were interpolated using topographic maps at a scale of 1:24000 with contour intervals of 10 and 20 feet (References 20 and 21).

For the streams studied by approximate methods only the 100-year floodplain boundary was delineated using topographic maps (References 20 and 21). Additional areas of approximate flooding were delineated from the Flood Hazard Boundary Map for Fairfield County, Ohio (Reference 22).

The 100- and 500-year floodplain boundaries are shown on the Flood Boundary and Floodway Map. In cases where the 100- and 500-year floodplain boundaries are close together, only the 100-year boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces the flood-carrying capacity, increases the flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 100-year floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced.

The floodways presented in this study were computed on the basis of equal conveyance reduction from each side of the floodplain. The results of these computations were tabulated at selected cross sections for each stream segment for which a floodway was computed and are presented in Table 3, Floodway Data.

No floodway was computed on Hunters Run and Lateral B through the reach upstream of the dams on these streams where ineffective flow conditions would exist. Floodways were not computed for Rush Creek, Little Rush Creek, Tributaries A, B, H, and I, Raccoon Run, and Turkey Run since no information exists on floodways in the areas affected by the completed flood-retarding reservoirs. Along streams where floodways have not been computed, the community must ensure that the cumulative effect of development in the floodplain will not cause more than a 1.0-foot increase in the base flood elevations at any point within the community.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
HOCKING RIVER								
A	2000	1416	10,852	1.6	765.0	765.0	765.5	0.5
B	5600	1163	8895	2.0	766.9	766.9	767.4	0.5
C	8580	730	6890	1.8	771.2	771.2	771.2	0.0
D	11,060	300	6445	1.6	772.3	772.3	772.3	0.0
E	16,110	697	4054	3.3	779.4	779.4	779.9	0.5
F	24,290	1364	7907	1.5	789.5	789.5	790.0	0.5
G	26,650	1279	5601	2.1	791.5	791.5	792.0	0.5
H	27,550	570	8239	1.0	793.4	793.4	793.9	0.5
I	32,150	523	3040	3.3	799.5	799.5	800.0	0.5
J	34,900	912	5341	1.9	801.4	801.4	801.9	0.5
K	39,850	1024	5529	2.0	804.7	804.7	805.2	0.5
L	75,135	1020	5110	0.3	836.2	836.2	836.7	0.5
M	76,875	435	1015	1.3	839.0	839.0	839.5	0.5
N	78,285	251	450	3.0	843.4	843.4	843.9	0.5
O	80,335	564	380	3.5	854.0	854.0	854.5	0.5
P	81,810	157	540	2.5	857.5	857.5	858.0	0.5
Q	83,010	101	300	4.5	861.1	861.1	861.6	0.5

[1] FEET ABOVE COUNTY BOUNDARY

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

HOCKING RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
HOCKING RIVER								
R	84,285	491	530	2.5	865.5	865.5	866.0	0.5
S	85,385	32	175	7.6	872.2	872.2	872.7	0.5
T	86,435	187	390	3.4	876.8	876.8	877.3	0.5
HOCKING RIVER DIVERSION								
A	1100[2]	370[4]	2936	1.6	772.6	772.6	772.6	0.0
B	5100[2]	780	3706	1.3	775.8	775.8	775.8	0.0
SOUTH FORK LICKING RIVER								
A	7850[3]	2345[5]	8140	0.7	885.0	885.0	886.0	1.0
B	10,300[3]	1952[5]	5324	1.1	886.8	886.8	887.8	1.0

[1] FEET ABOVE COUNTY BOUNDARY
[2] FEET ABOVE CONFLUENCE WITH HOCKING RIVER
[3] FEET ABOVE INTERSTATE 70
[4] THIS WIDTH EXTENDS WITHIN AREA NOT INCLUDED
[5] THIS WIDTH EXTENDS BEYOND COUNTY BOUNDARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

HOCKING RIVER — HOCKING RIVER DIVERSION — SOUTH FORK LICKING RIVER

TABLE 3

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WALNUT CREEK								
A	175	1203	13,418	1.7	762.4	762.4	763.4	1.0
B	2775	1063	11,401	2.1	763.3	763.3	764.3	1.0
C	4575	871	8558	2.7	764.2	764.2	765.2	1.0
D	6875	922	9676	2.4	765.1	765.1	766.1	1.0
E	9075	294	2614	8.9	769.7	769.7	770.7	1.0
F	10,455	1796	19,975	1.2	771.2	771.2	772.2	1.0
G	14,705	1656	14,224	1.6	772.3	772.3	773.3	1.0
H	18,235	1248	9407	1.9	773.9	773.9	774.9	1.0
I	20,785	1215	8173	2.2	775.5	775.5	775.5	1.0
J	21,935	1382	10,577	1.7	778.0	778.0	779.0	1.0
K	24,585	1514	9520	1.9	779.3	779.3	780.3	1.0
L	29,805	1038	6697	2.7	784.1	784.1	785.1	1.0
M	30,500	1226	11,680	1.5	788.7	788.7	789.7	1.0
N	32,220	790	7327	2.4	789.4	789.4	790.4	1.0
O	34,550	283	2943	5.6	791.4	791.4	792.4	1.0
P	36,470	887	7313	2.3	792.8	792.8	793.8	1.0
Q	40,970	840	5877	2.8	796.5	796.5	797.5	1.0
R	44,320	707	4855	3.3	800.2	800.2	801.2	1.0
S	44,750	1025	9451	1.7	803.2	803.2	804.2	1.0
T	46,600	607	4523	3.0	804.5	804.5	805.5	1.0

[1] FEET ABOVE COUNTY BOUNDARY

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

WALNUT CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WALNUT CREEK								
U	49,010	883	5600	2.4	806.7	806.7	807.7	1.0
V	49,910	624	4232	3.2	807.5	807.5	808.5	1.0
W	54,360	677	4895	2.7	812.2	812.2	813.2	1.0
X	55,880	695	4570	2.9	813.4	813.4	814.4	1.0
Y	57,380	884	4992	2.7	814.7	814.7	815.7	1.0
Z	57,800	198	1899	7.1	815.6	815.6	816.6	1.0
AA	61,620	387	3323	4.0	820.9	820.9	821.9	1.0
AB	65,900	553	3674	3.6	825.5	825.5	826.5	1.0
AC	68,310	295	2363	5.6	828.8	828.8	829.8	1.0
AD	71,200	356	2980	4.4	832.5	832.5	833.5	1.0
AE	77,350	501	3844	3.4	839.4	839.4	840.4	1.0
AF	79,470	322[2]	3879	3.4	843.2	843.2	844.2	1.0
AG	81,400	721[2]	4861	2.0	844.7	844.7	845.7	1.0
AH	84,060	703[2]	5177	1.9	845.8	845.8	846.8	1.0
AI	86,110	451[2]	3222	3.0	847.1	847.1	848.1	1.0
AJ	89,755	478	3745	2.6	851.7	851.7	852.7	1.0
AK	93,055	552	4377	2.2	853.8	853.8	854.8	1.0
AL	95,835	259	2426	4.0	856.6	856.6	857.6	1.0
AM	98,155	420	3740	2.6	858.6	858.6	859.6	1.0
AN	99,665	561	4443	2.2	859.5	859.5	860.5	1.0

[1] FEET ABOVE COUNTY BOUNDARY
[2] THIS WIDTH EXTENDS WITHIN AREA NOT INCLUDED

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

WALNUT CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WALNUT CREEK								
AO	101,615	396	3193	3.0	861.0	861.0	862.0	1.0
AP	101,865	376	3333	2.9	862.0	862.0	863.0	1.0
AQ	106,445	627	3627	1.8	864.5	864.5	865.5	1.0
AR	109,695	562	3059	2.2	867.0	867.0	868.0	1.0
AS	111,115	334	2343	2.9	869.2	869.2	870.2	1.0
AT	112,215	329	2267	2.9	870.3	870.3	871.3	1.0
LITTLE WALNUT CREEK								
A	3050[2]	299	2281	2.1	864.3	864.3	865.3	1.0
B	5250[2]	330	2212	2.2	865.4	865.4	866.4	1.0
C	7400[2]	467	2873	1.7	866.9	866.9	867.9	1.0
D	9250[2]	461	2641	1.8	868.7	868.7	869.7	1.0
E	11,650[2]	283	1722	2.7	872.7	872.7	873.7	1.0
F	12,960[2]	446	2723	1.7	873.8	873.8	874.8	1.0
G	14,650[2]	221	1265	3.2	875.8	875.8	876.8	1.0
H	15,490[2]	134	879	4.5	877.7	877.7	878.7	1.0
I	17,490[2]	153	792	3.4	881.1	881.1	882.1	1.0
J	18,470[2]	159	899	3.0	885.3	885.3	886.3	1.0
K	20,360[2]	93	522	5.2	891.0	891.0	892.0	1.0

[1] FEET ABOVE COUNTY BOUNDARY
[2] FEET ABOVE CONFLUENCE WITH WALNUT CREEK

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

WALNUT CREEK – LITTLE WALNUT CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
POPLAR CREEK								
A	2080	185	1213	5.1	807.3	807.3	808.3	1.0
B	3180	295	1816	3.4	810.0	810.0	811.0	1.0
C	3580	202	1440	4.3	811.2	811.2	812.2	1.0
D	6140	182	1147	5.4	817.0	817.0	818.0	1.0
E	10,090	174	1154	5.3	827.6	827.6	828.6	1.0
F	11,180	77	642	8.9	831.9	831.9	832.9	1.0
G	11,560	450	3524	1.6	837.1	837.1	838.1	1.0
H	14,510	193	1227	4.7	842.4	842.4	843.4	1.0
I	15,830	199	1339	4.3	845.9	845.9	846.9	1.0
J	17,530	226	1262	4.5	851.4	851.4	852.4	1.0
K	18,730	78	635	8.5	855.0	855.0	856.0	1.0
L	19,420	598	3920	1.4	858.3	858.3	859.3	1.0
M	21,715	95	770	7.0	864.9	864.9	865.9	1.0
N	25,365	153	948	5.1	876.5	876.5	877.5	1.0
O	26,975	105	722	6.7	884.3	884.3	885.3	1.0
P	28,435	65	561	7.6	890.2	890.2	891.2	1.0
Q	29,045	104	849	5.0	892.5	892.5	893.5	1.0
R	31,465	146	860	5.0	901.8	901.8	902.8	1.0
S	33,795	83	616	7.0	909.7	909.7	910.7	1.0
T	35,295	230	1000	4.3	914.9	914.9	915.9	1.0
U	35,715	73	466	4.3	916.0	916.0	917.0	1.0
V	37,115	57	320	6.2	922.8	922.8	923.8	1.0
W	39,245	47	291	6.9	934.0	934.0	935.0	1.0
X	40,015	54	324	6.2	938.5	938.5	939.5	1.0
Y	42,155	37	249	8.0	952.1	952.1	953.1	1.0

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[1] FEET ABOVE CONFLUENCE WITH WALNUT CREEK

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

POPLAR CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
PAWPAW CREEK								
A	385	267	6617	0.5	868.9	868.9	869.9	1.0
B	2185	196	3382	1.0	869.0	869.0	870.9	1.0
C	3805	191	2164	1.5	869.2	869.2	870.2	1.0
D	6185	88	728	3.3	871.6	871.6	872.6	1.0
PAWPAW CREEK TRIBUTARY								
A	780[2]	78	662	1.9	869.3	869.3	870.3	1.0
B	1490[2]	147	1007	1.3	869.5	869.5	870.5	1.0
BALTIMORE TRIBUTARY								
A	1740[2]	687	4075	0.7	852.0	852.0	853.0	1.0
B	5890[2]	100	516	5.3	863.5	863.5	864.5	1.0
C	7240[2]	61	398	6.9	868.6	868.6	869.6	1.0

[1] FEET ABOVE VILLAGE OF BALTIMORE CORPORATE LIMITS
[2] FEET ABOVE CONFLUENCE WITH PAWPAW CREEK

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

PAWPAW CREEK—PAWPAW CREEK TRIBUTARY—BALTIMORE TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
HUNTERS RUN								
A	275	178	560	3.9	834.9	834.9	835.4	0.5
B	775	135	605	3.6	836.7	836.7	837.2	0.5
C	1825	178	995	2.2	841.5	841.5	842.0	0.5
D	2975	71	435	5.0	846.4	846.4	846.9	0.5
E	3500	121	690	3.2	849.2	849.2	849.7	0.5
F	5050	332	1580	1.4	855.2	855.2	855.7	0.5
G	5925	194	765	2.9	857.1	857.1	857.6	0.5
H	6850	70	350	6.3	860.9	860.9	861.4	0.5
I	7975	61	245	5.6	864.1	864.1	864.6	0.5
J	10,150	59	290	4.8	872.8	872.8	873.3	0.5
K	11,275	82	300	4.6	875.8	875.8	876.3	0.5
L	12,150	44	280	4.9	878.1	878.1	878.6	0.5
M	18,400	72	400	6.6	901.6	901.6	902.1	0.5
N	19,550	401	970	2.7	909.1	909.1	909.6	0.5
O	21,000	64	300	3.6	914.2	914.2	914.7	0.5
P	21,900	138	390	2.8	918.0	918.0	918.5	0.5
Q	23,450	174	770	1.4	926.2	926.2	926.7	0.5

[1] FEET ABOVE U.S. ROUTE 22 (AT THE CITY OF LANCASTER CORPORATE LIMITS)

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

HUNTERS RUN

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
PLEASANT RUN								
A	1100	200	2842	1.4	791.6	791.6	792.1	0.5
B	5370	392	1670	2.1	799.2	799.2	799.7	0.5
C	8170	343	1382	2.6	808.3	808.3	803.8	0.5
D	11,170	346	1376	2.4	807.9	807.9	808.4	0.5
E	12,890	317	1080	3.1	812.2	812.2	812.7	0.5
F	15,850	302	986	3.4	817.8	817.8	818.3	0.5
G	17,520	496	1626	2.1	820.6	820.6	821.1	0.5
H	26,480	188	856	3.0	842.5	842.5	843.0	0.5
I	28,470	171	724	3.6	848.2	848.2	848.7	0.5
J	29,150	179	710	3.4	849.9	849.9	850.4	0.5
K	30,940	262	1107	2.2	855.1	855.1	855.6	0.5
L	32,080	132	598	4.1	859.8	859.8	860.3	0.5
M	34,380	173	807	3.0	864.3	864.3	864.8	0.5
N	35,710	303	976	2.5	866.8	866.8	867.3	0.5
O	38,070	174	824	3.0	874.2	874.2	874.7	0.5
P	40,890	306	1031	2.4	879.1	879.1	879.6	0.5
Q	42,870	475	1493	1.6	886.2	886.2	886.7	0.5
R	44,810	407	1315	1.8	888.9	888.9	889.4	0.5
S	45,790	340	1860	1.2	893.5	893.5	894.0	0.5
T	47,770	196	785	2.8	897.8	897.8	898.3	0.5
U	49,240	270	904	2.4	900.6	900.6	901.1	0.5

[1] FEET ABOVE CONFLUENCE WITH HOCKING RIVER

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

PLEASANT RUN

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
PLEASANT RUN								
V	51,420	557	1558	1.4	904.6	904.6	905.1	0.5
W	53,620	51	339	6.5	917.1	917.1	917.6	0.5
PLEASANT RUN LATERAL								
A	2840[2]	390	1007	1.5	821.8	821.8	822.3	0.5
B	5240[2]	307	806	1.3	827.5	827.5	828.0	0.5
EWING RUN								
A	12,600[3]	99[4]	623	5.4	877.3	877.3	877.8	0.5
B	14,600[3]	82[4]	475	7.1	890.2	890.2	890.7	0.5

[1] FEET ABOVE CONFLUENCE WITH HOCKING RIVER
[2] FEET ABOVE CONFLUENCE WITH PLEASANT RUN
[3] FEET ABOVE CONFLUENCE WITH BALDWIN RUN
[4] THIS WIDTH EXTENDS WITHIN AREA NOT INCLUDED

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

PLEASANT RUN — PLEASANT RUN LATERAL — EWING RUN

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
FETTERS RUN								
A	4440	124[3]	558	6.1	835.0	835.0	835.5	0.5
B	5670	58[3]	327	10.4	841.7	841.7	842.2	0.5
C	13,170	91	567	5.3	878.6	878.6	879.1	0.5
D	15,160	66	317	6.1	888.5	888.5	889.0	0.5
E	16,410	44	262	7.4	897.0	897.0	897.5	0.5
F	18,110	75	393	4.9	906.8	906.8	907.3	0.5
OHIO CANAL								
A	1375[2]	219	1710	1.4	833.2	833.2	833.7	0.5
B	2600[2]	274	1735	1.0	833.9	833.9	834.4	0.5
C	4525[2]	379	1140	1.6	835.6	835.6	836.1	0.5
D	5175[2]	169	770	2.3	836.8	836.8	837.3	0.5
E	6625[2]	458	2070	0.9	838.4	838.4	838.9	0.5
F	8550[2]	577	2740	0.7	838.7	838.7	839.2	0.5
G	9950[2]	407	975	1.8	840.4	840.4	840.9	0.5
H	12,675[2]	198	1020	0.8	841.7	841.7	842.2	0.5

[1] FEET ABOVE CONFLUENCE WITH BALDWIN RUN
[2] FEET ABOVE CSX RAILROAD
[3] THIS WIDTH EXTENDS WITHIN AREA NOT INCLUDED

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

FETTERS RUN – OHIO CANAL

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
LATERAL A								
A	1600	119	530	1.3	849.5	849.5	850.0	0.5
B	3425	125	660	1.0	856.9	856.9	857.4	0.5
C	4825	120	450	1.5	860.6	860.6	861.1	0.5
D	6450	40	135	5.1	869.0	869.0	869.5	0.5
E	9275	184	709	1.0	876.2	876.2	876.7	0.5
F	11,500	114	265	2.5	884.4	884.4	884.9	0.5
LATERAL B								
A	1200	611	1907	0.6	841.3	841.3	841.8	0.5
LATERAL C								
A	1050	38	195	5.7	837.0	837.0	837.5	0.5
B	2225	407	740	1.5	840.1	840.1	840.6	0.5
C	2875	110	460	2.5	842.0	842.0	842.5	0.5
D	4325	234	1365	0.8	850.2	850.2	850.7	0.5
E	5400	207	890	1.3	850.9	850.9	851.4	0.5
F	6325	65	310	3.7	854.3	854.3	854.8	0.5
G	7425	424	1900	0.6	857.2	857.2	857.7	0.5
H	9225	150	535	2.1	862.4	862.4	862.9	0.5

[1] FEET ABOVE CONFLUENCE WITH OHIO CANAL

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

LATERAL A — LATERAL B — LATERAL C

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
LATERAL D								
A	300	132	510	3.4	849.0	849.0	849.5	0.5
B	1800	127	510	3.4	856.2	856.2	856.7	0.5
C	2750	102	410	3.9	860.7	860.7	861.2	0.5
D	4100	168	485	3.3	865.2	865.2	865.7	0.5
E	5250	309[3]	900	1.8	867.0	867.0	867.5	0.5
F	6450	765	1540	1.0	868.4	868.4	868.9	0.5
G	7450	783	1303	1.2	870.7	870.7	871.2	0.5
H	8700	210	615	2.6	874.1	874.1	874.6	0.5
I	10,100	45	190	8.4	881.8	881.8	882.3	0.5
BLUE VALLEY LATERAL								
A	500[2]	273	1065	2.1	773.6	773.6	774.1	0.5
B	4250[2]	335	1092	2.1	783.0	783.0	783.5	0.5
C	6180[2]	210	812	3.2	788.0	788.0	788.5	0.5
D	10,380[2]	336	624	2.8	797.6	797.6	798.1	0.5

[1] FEET ABOVE CITY OF LANCASTER CORPORATE LIMITS
[2] FEET ABOVE CONFLUENCE WITH HOCKING RIVER
[3] THIS WIDTH EXTENDS WITHIN AREA NOT INCLUDED

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

LATERAL D—BLUE VALLEY LATERAL

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
BLACKLICK CREEK								
A	1650	559	4217	2.59	796.7	796.7	797.2	0.5
B	3640	537	4214	2.59	800.8	800.8	801.3	0.5
C	5250	486[2]	2961	3.68	805.4	805.4	805.9	0.5
D	7680	462[2]	2848	3.83	812.5	812.5	813.0	0.5
E	10,300	325[2]	1911	5.55	820.3	820.3	820.8	0.5
F	11,700	482[2]	2948	3.60	823.2	823.2	823.7	0.5
G	16,800	895	3696	2.71	836.8	836.8	837.3	0.5

[1] FEET ABOVE COUNTY BOUNDARY
[2] THIS WIDTH EXTENDS WITHIN AREA NOT INCLUDED

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

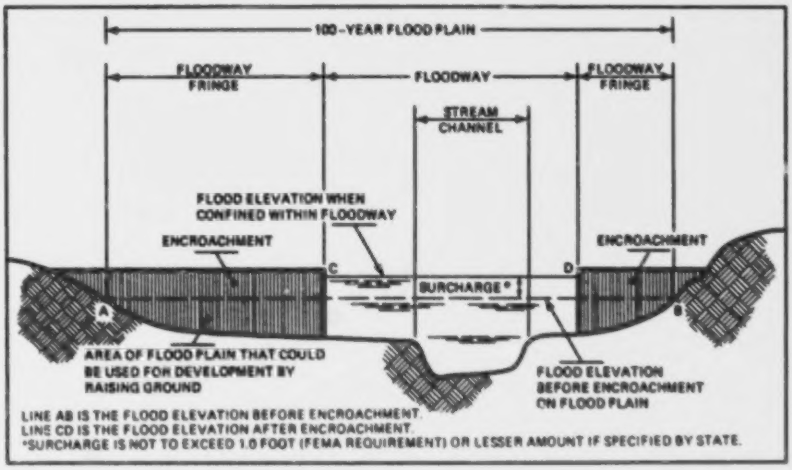
FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOODWAY DATA

BLACKLICK CREEK

As shown on the Flood Boundary and Floodway Map, the floodway boundaries were computed at cross sections. Between cross sections, the boundaries were interpolated. In cases where the floodway and the 100-year floodplain boundaries are either close together or collinear, only the floodway boundary has been shown.

The area between the floodway and the 100-year floodplain boundaries is termed the floodway fringe. The floodway fringe thus encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 2. Portions of the floodway for the following streams lie outside of the unincorporated areas of the county: the Hocking River, Pleasant Run, Fetters Run, Ewing Run, Hunters Run, Ohio Canal, Lateral D, Rush Creek, Walnut Creek, Pawpaw Creek, Baltimore Tributary, South Fork Licking River, and Blacklick Creek.


100-YEAR FLOOD PLAIN
FLOODWAY FRINGE
FLOODWAY
FLOODWAY FRINGE
STREAM CHANNEL
FLOOD ELEVATION WHEN CONFINED WITHIN FLOODWAY
ENCROACHMENT
ENCROACHMENT
C
D
SURCHARGE *
A
B
AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND
FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN

LINE AB IS THE FLOOD ELEVATION BEFORE ENCROACHMENT.
LINE CD IS THE FLOOD ELEVATION AFTER ENCROACHMENT.
*SURCHARGE IS NOT TO EXCEED 1.0 FOOT (FEMA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE.

FIGURE 2 - Floodway Schematic

The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

5.0 INSURANCE APPLICATION

To establish actuarial insurance rates, data from the engineering study must be transformed into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors, and flood insurance zone designations for each flooding source studied in detail affecting Fairfield County.

5.1 Reach Determinations

Reaches are defined as sections of floodplain that have relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods. This difference may not have a variation greater than that indicated in the following table for more than 20 percent of the reach:

Average Difference Between 10- and 100-year Floods	Variation
Less than 2 feet	0.5 foot
2 to 7 feet	1.0 foot
7.1 to 12 feet	2.0 feet
More than 12 feet	3.0 feet

The locations of the reaches determined for the flooding sources of Fairfield County are shown on the Flood Profiles and summarized in Table 4, Flood Insurance Zone Data.

5.2 Flood Hazard Factors

The Flood Hazard Factor (FHF) is used to establish relationships between depth and frequency of flooding in any reach. This relationship is then used with depth-damage relationships for various classes of structures to establish actuarial insurance rate tables.

The FHF for a riverine reach is the average weighted difference between the 10- and 100-year flood water-surface elevations rounded to the nearest 0.5 foot, multiplied by 10, and shown as a 3-digit code. For example, if the difference between elevations is 0.7 foot, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference is greater than 10.0 feet, it is rounded to the nearest whole foot.

5.3 Flood Insurance Zones

Flood insurance zones and zone numbers are assigned based on the type of flood hazard and the FHF, respectively. A unique zone number is associated with each possible FHF and varies from 1 for a FHF of 005 to a maximum of 30 for a FHF of 200 or greater.

Zone A:	Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods; no base flood elevations are shown or FHFs determined.
Zones A1-A8, A12, A13, A22:	Special Flood Hazard Areas inundated by the 100-year flood, determined by detailed methods; base flood elevations are shown, and zones subdivided according to FHFs.

Zone B:	Areas between the Special Flood Hazard Areas and the limits of the 500-year flood; areas that are protected from the 100- and 500-year floods by dike, levee, or other water control structure; or areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; and areas subject to 100-year flooding from sources with drainage areas less than 1 square mile. Zone B is not subdivided.
Zone C:	Areas of minimal flooding; not subdivided.

Flood elevation differences, FHFs, flood insurance zones, and base flood elevations for each flooding source studied in detail in the community are summarized in Table 4, Flood Insurance Zone Data.

5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for Fairfield County is, for insurance purposes, the principal product of the Flood Insurance Study. This map contains the official delineation of flood insurance zones and base flood elevation lines. Base flood elevations show the locations of the expected whole-foot water-surface elevations of the base (100-year) flood. The base flood elevations and zone numbers are used by insurance agents, in conjunction with structure elevations and characteristics, to assign actuarial insurance rates to structures and contents insured under the National Flood Insurance Program.

6.0 OTHER STUDIES

Flood Insurance Studies published for Licking and Franklin Counties, Ohio (References 5 and 23), the Cities of Columbus and Reynoldsburg, Ohio (References 24 and 25), and the Villages of Canal Winchester and Buckeye Lake, Ohio (References 17 and 26) are in agreement with this Flood Insurance Study. This study includes a few delineated flood areas adjacent to the City of Lancaster corporate limits that are not shown in the Flood Insurance Study for the City of Lancaster (Reference 27). This apparent discrepancy is a result of the difference in the scope of study between this study and the Lancaster study, which did not include an analysis of these reaches.

The Flood Insurance Studies for the Villages of Bremen and Sugar Grove, Ohio (References 28 and 29) do not agree with this study due to the effects of recent channel improvements on Rush Creek that have been incorporated into this study.

The Flood Insurance Rate Map printed for the Village of Thurston, Ohio (Reference 30) is in agreement with this study.

This Flood Insurance Study supersedes the previously printed Flood Hazard Boundary Map for Fairfield County (Reference 22).

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
HOCKING RIVER							
REACH 1	0115,0120,0185	−1.5	−0.55	1.0	015	A3	VARIES – SEE MAP
REACH 2	0085,0095,0105	−0.5	−0.16	0.3	005	A1	VARIES – SEE MAP
HOCKING RIVER DIVERSION							
REACH 1	0185	−1.2	−0.4	0.7	010	A2	VARIES – SEE MAP
SOUTH FORK LICKING RIVER							
REACH 1	0035	−1.5	−0.5	1.0	015	A3	VARIES – SEE MAP
WALNUT CREEK							
REACH 1	0015	−3.8	−1.6	2.6	040	A8	VARIES – SEE MAP
REACH 2	0015,0020, 0040,0045	−2.8	−1.5	1.3	030	A6	VARIES – SEE MAP
LITTLE WALNUT CREEK							
REACH 1	0045	−1.7	−1.0	0.8	015	A3	VARIES – SEE MAP

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOOD INSURANCE ZONE DATA

HOCKING RIVER – HOCKING RIVER DIVERSION – SOUTH FORK LICKING RIVER – WALNUT CREEK – LITTLE WALNUT CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
POPLAR CREEK							
REACH 1	0010,0020,0030, 0040	−2.5	−1.2	0.8	025	A5	VARIES—SEE MAP
PAWPAW CREEK							
REACH 1	0040	−11.8	−7.0	6.5	120	A22	VARIES—SEE MAP
REACH 2	0040	−6.6	−4.4	5.4	065	A13	VARIES—SEE MAP
PAWPAW CREEK TRIBUTARY							
REACH 1	0040	−6.1	−4.3	6.2	060	A12	VARIES—SEE MAP
RUSH CREEK							
REACH 1	0185	−3.0	N/A	N/A	030	A6	VARIES—SEE MAP
REACH 2	0185	−1.3	N/A	N/A	015	A3	VARIES—SEE MAP
REACH 3	0130,0140	−1.1	N/A	1.3	010	A2	VARIES—SEE MAP
LITTLE RUSH CREEK							
REACH 1	0140,0130	−1.4	N/A	1.0	015	A3	VARIES—SEE MAP
REACH 2	0130	−2.4	N/A	1.9	025	A5	VARIES—SEE MAP
REACH 3	0065,0130	−1.1	N/A	0.5	010	A2	VARIES—SEE MAP

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOOD INSURANCE ZONE DATA

POPLAR CREEK — PAWPAW CREEK — PAWPAW CREEK TRIBUTARY — RUSH CREEK — LITTLE RUSH CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
TRIBUTARY A							
REACH 1	0185	−1.8	N/A	1.7	020	A4	VARIES—SEE MAP
REACH 2	0120,0185	−1.0	N/A	0.8	010	A2	VARIES—SEE MAP
TRIBUTARY B							
REACH 1	0185	−1.3	N/A	1.1	015	A3	VARIES—SEE MAP
REACH 2	0185	−0.5	N/A	0.5	005	A1	VARIES—SEE MAP
BALTIMORE TRIBUTARY							
REACH 1	0040	−2.3	−1.2	1.0	025	A5	VARIES—SEE MAP
RACCOON RUN							
REACH 1	0120,0140	−1.0	N/A	0.7	010	A2	VARIES—SEE MAP
TURKEY RUN							
REACH 1	0140	−1.0	N/A	N/A	010	A2	VARIES—SEE MAP

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOOD INSURANCE ZONE DATA

TRIBUTARY A — TRIBUTARY B — BALTIMORE TRIBUTARY — RACCOON RUN — TURKEY RUN

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
TRIBUTARY H							
REACH 1	0110,0130	−1.1	N/A	1.1	010	A2	VARIES – SEE MAP
TRIBURARY I							
REACH 1	0140	−0.5	N/A	N/A	005	A1	VARIES – SEE MAP
HUNTERS RUN							
REACH 1	0095,0115	−1.0	−0.4	0.6	010	A2	VARIES – SEE MAP
PLEASANT RUN							
REACH 1	0120	−0.8	−0.2	0.5	010	A2	VARIES – SEE MAP
REACH 2	0120,0110	−0.6	−0.2	0.5	005	A1	VARIES – SEE MAP
PLEASANT RUN LATERAL							
REACH 1	0120	−0.5	−0.1	0.4	005	A1	VARIES – SEE MAP
EWING RUN							
REACH 1	0110	−1.4	−0.4	0.8	015	A3	VARIES – SEE MAP

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOOD INSURANCE ZONE DATA

TRIBUTARY H – TRIBUTARY I – HUNTERS RUN – PLEASANT RUN – PLEASANT RUN LATERAL – EWING RUN

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (FEET NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
FETTERS RUN							
REACH 1	0115	−1.5	−0.5	0.8	015	A3	VARIES–SEE MAP
REACH 2	0105	−1.5	−0.5	0.8	015	A3	VARIES–SEE MAP
OHIO CANAL							
REACH 1	0085,0105	−0.8	−0.3	0.7	010	A2	VARIES–SEE MAP
LATERAL A							
REACH 1	0085	−0.7	−0.2	0.4	005	A1	VARIES–SEE MAP
LATERAL B							
REACH 1	0085	−0.7	−0.2	0.4	005	A1	VARIES–SEE MAP
REACH 2	0085	−2.8	−0.9	1.6	030	A6	VARIES–SEE MAP
REACH 3	0085	−1.3	−0.4	0.7	015	A3	VARIES–SEE MAP

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOOD INSURANCE ZONE DATA

FETTERS RUN – OHIO CANAL – LATERAL A – LATERAL B

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD EIEVATION[3] (FEET NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
LATERAL C							
REACH 1	0085,0105	−0.7	−0.2	0.5	005	A1	VARIES—SEE MAP
REACH 2	0085,0105	−1.2	−0.2	0.4	010	A2	VARIES—SEE MAP
LATERAL D							
REACH 1	0085,0095	−0.9	−0.2	0.4	010	A2	VARIES—SEE MAP
BLUE VALLEY LATERAL							
REACH 1	0185,0200	−1.0	−0.4	0.5	010	A2	VARIES—SEE MAP
BLACKLICK CREEK							
REACH 1	0005	N/A	N/A	N/A	015	A3	VARIES—SEE MAP

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

FLOOD INSURANCE ZONE DATA

LATERAL C—LATERAL D—BLUE VALLEY LATERAL—BLACKLICK CREEK

7.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, Federal Emergency Management Agency, 300 South Wacker Drive, Chicago, Illinois 60606.

8.0 REFERENCES AND BIBLIOGRAPHY

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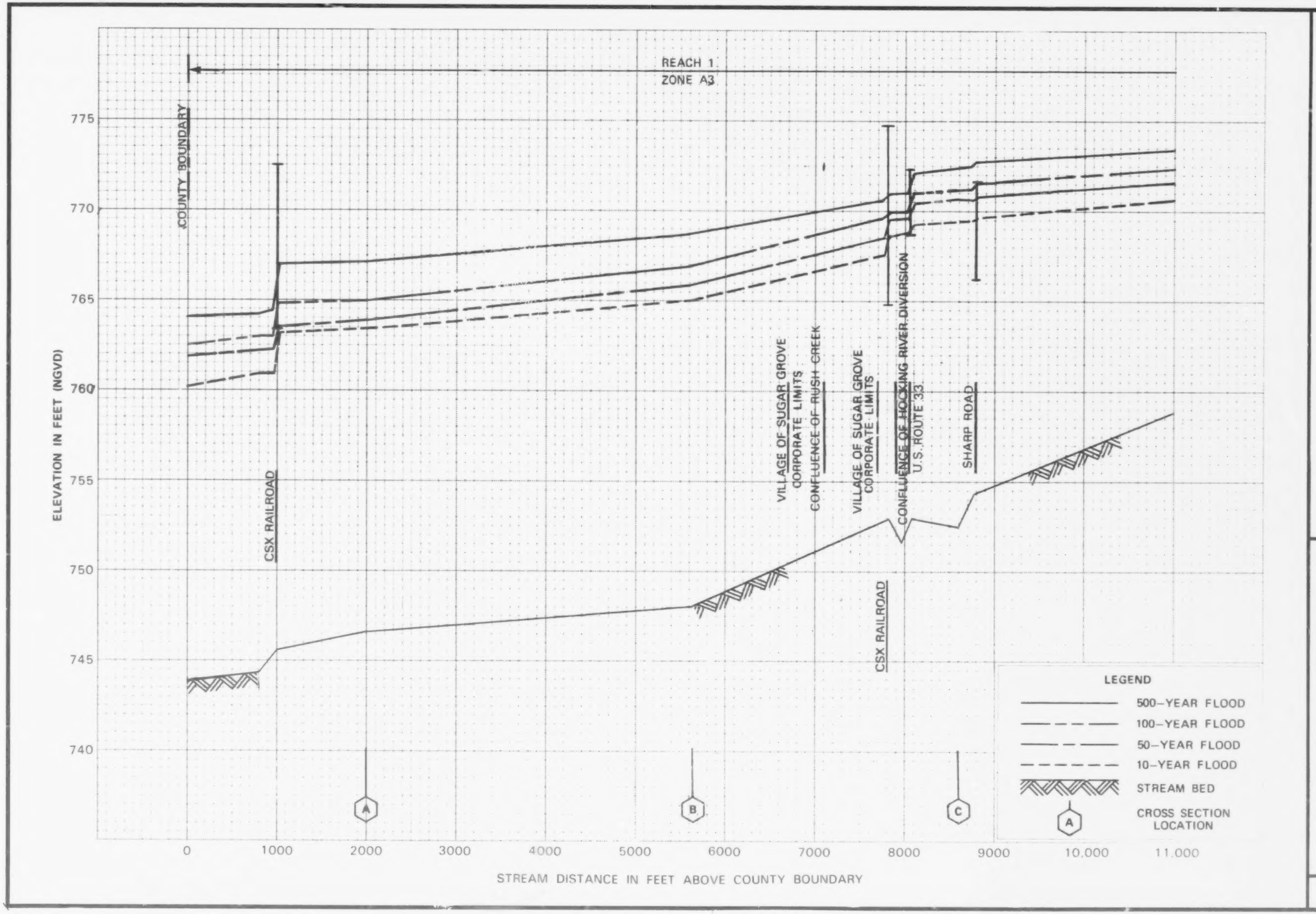


FLOOD PROFILES

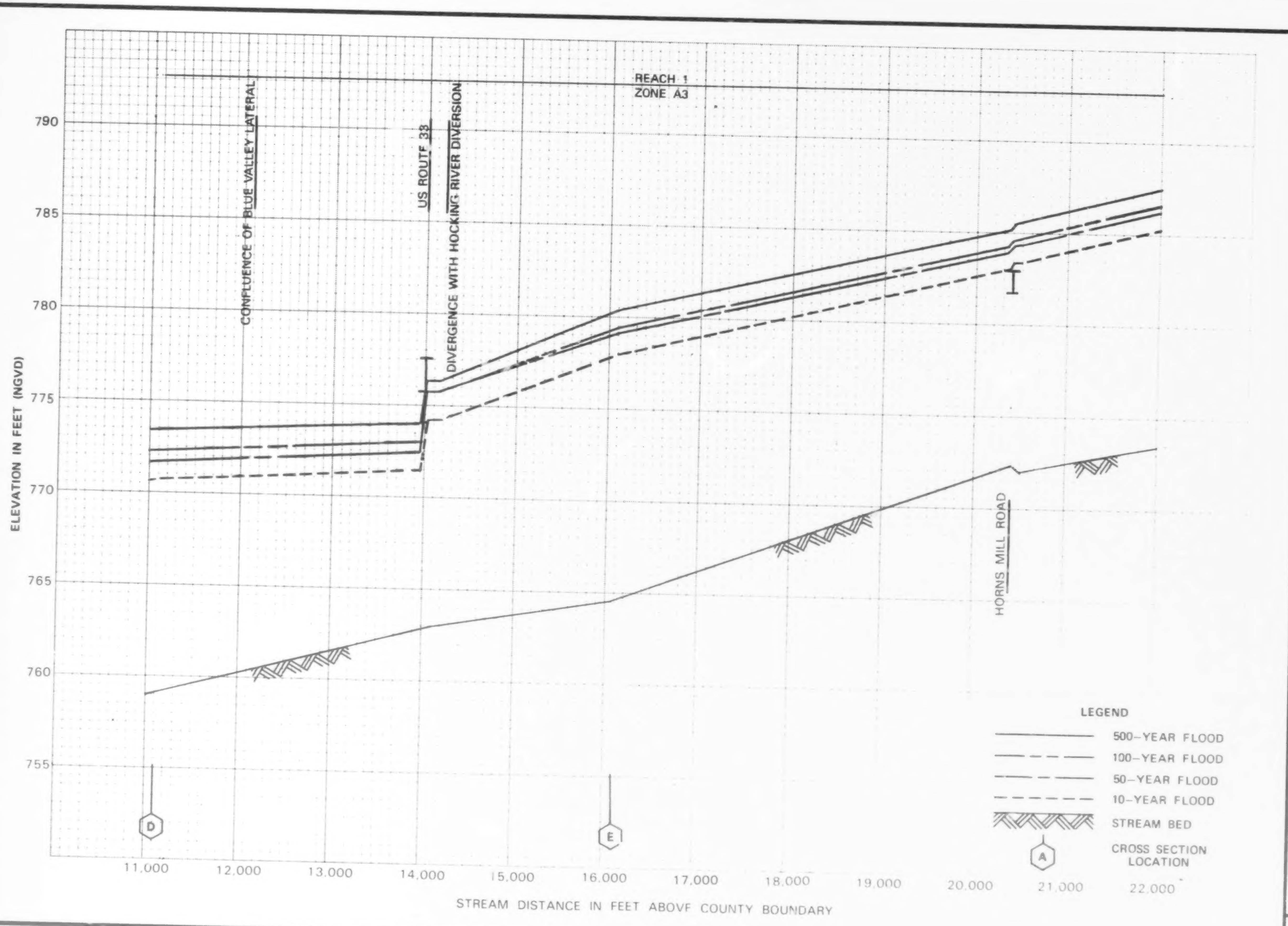
HOCKING RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

01P



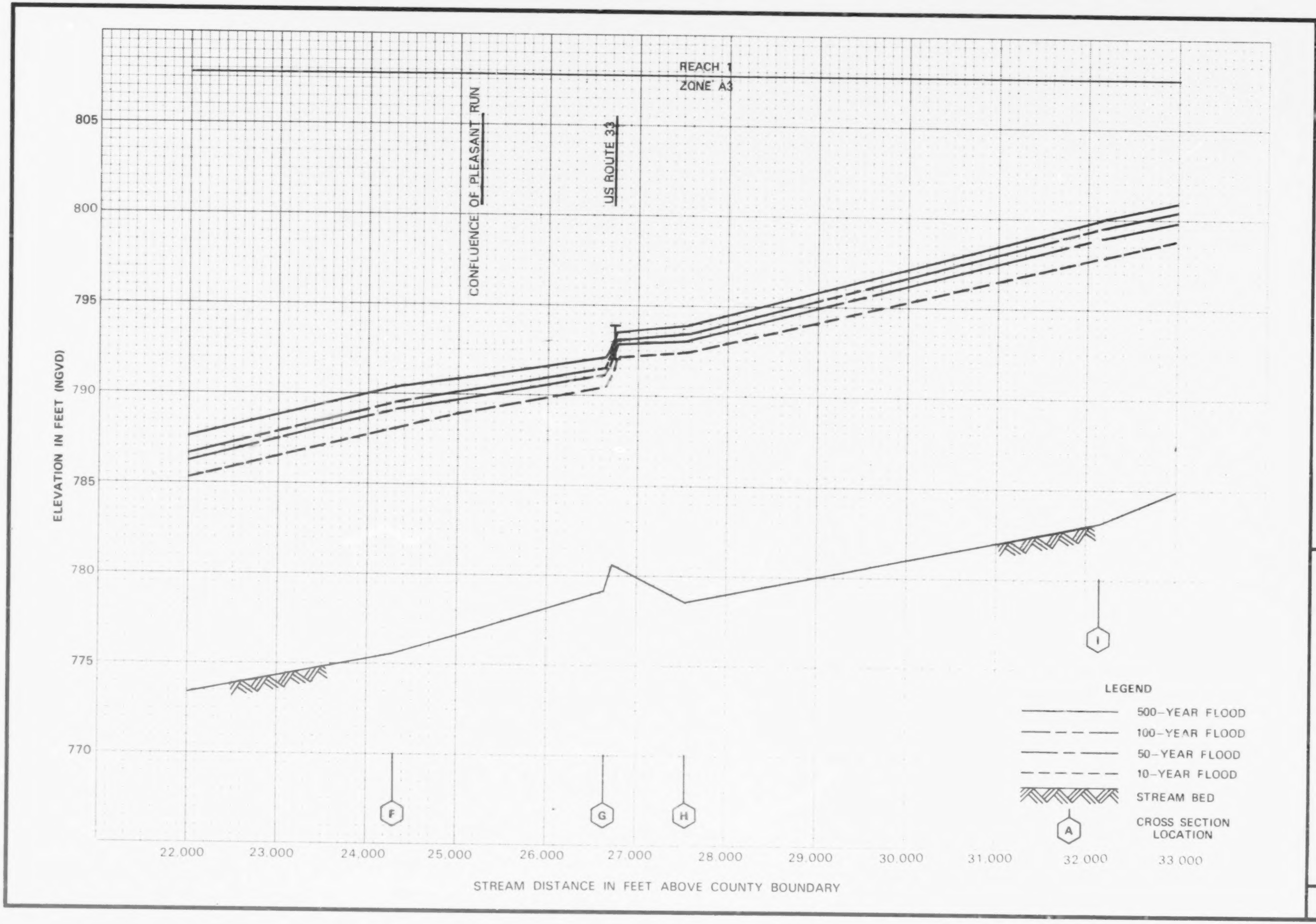
FLOOD PROFILES

HOCKING RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

02P



FLOOD PROFILES

HOCKING RIVER

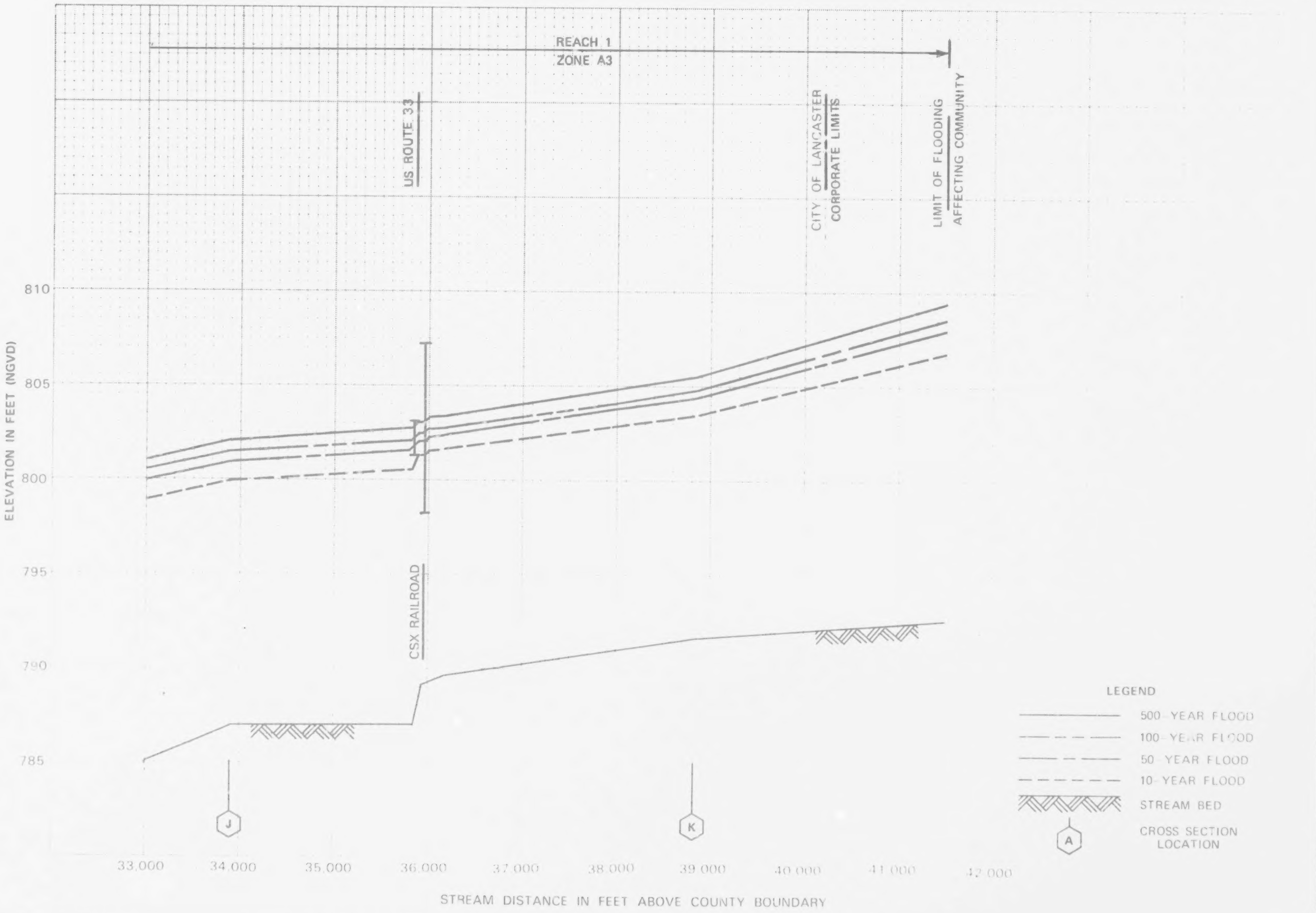
FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

03P

46



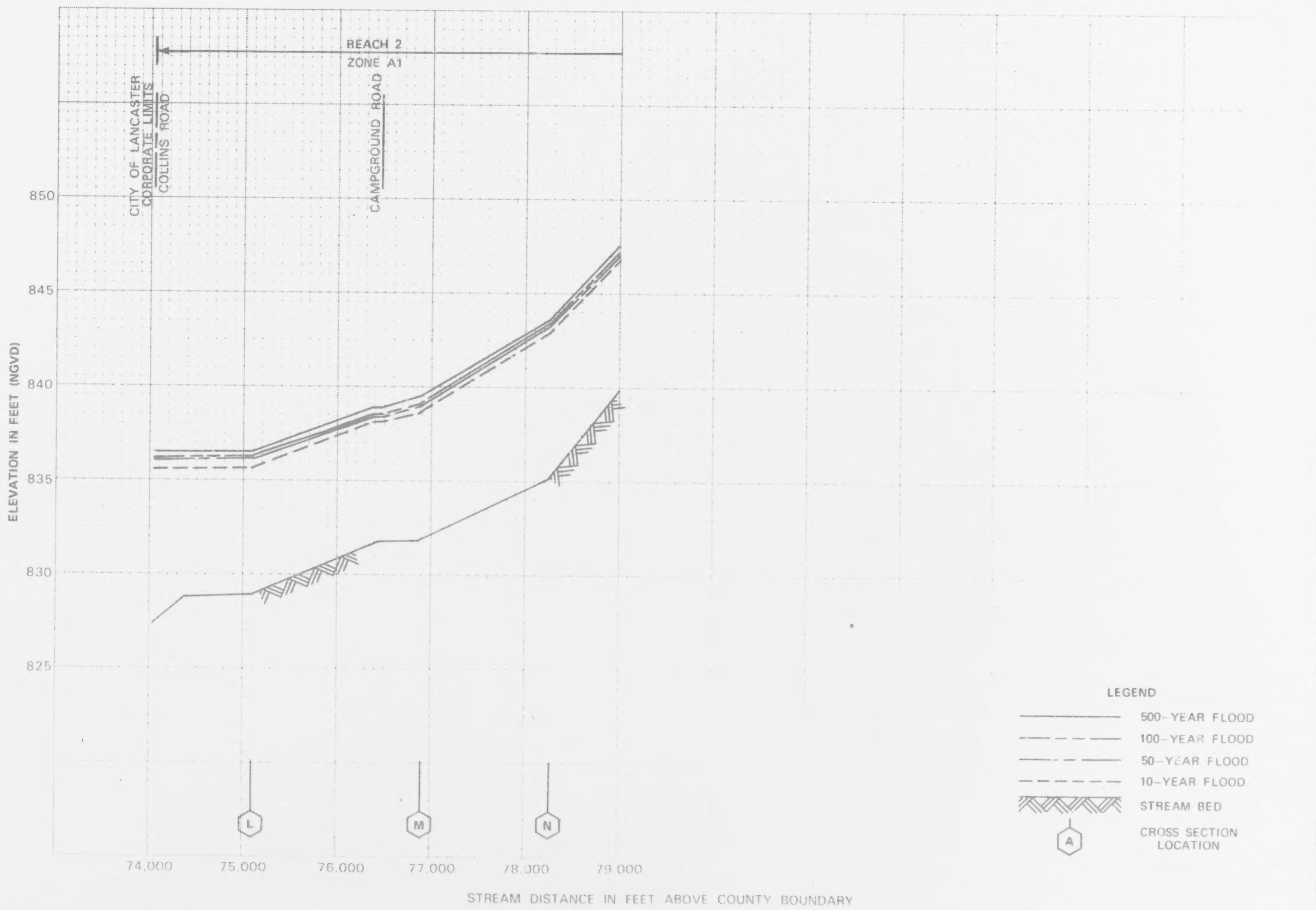
FLOOD PROFILES

HOCKING RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

04P



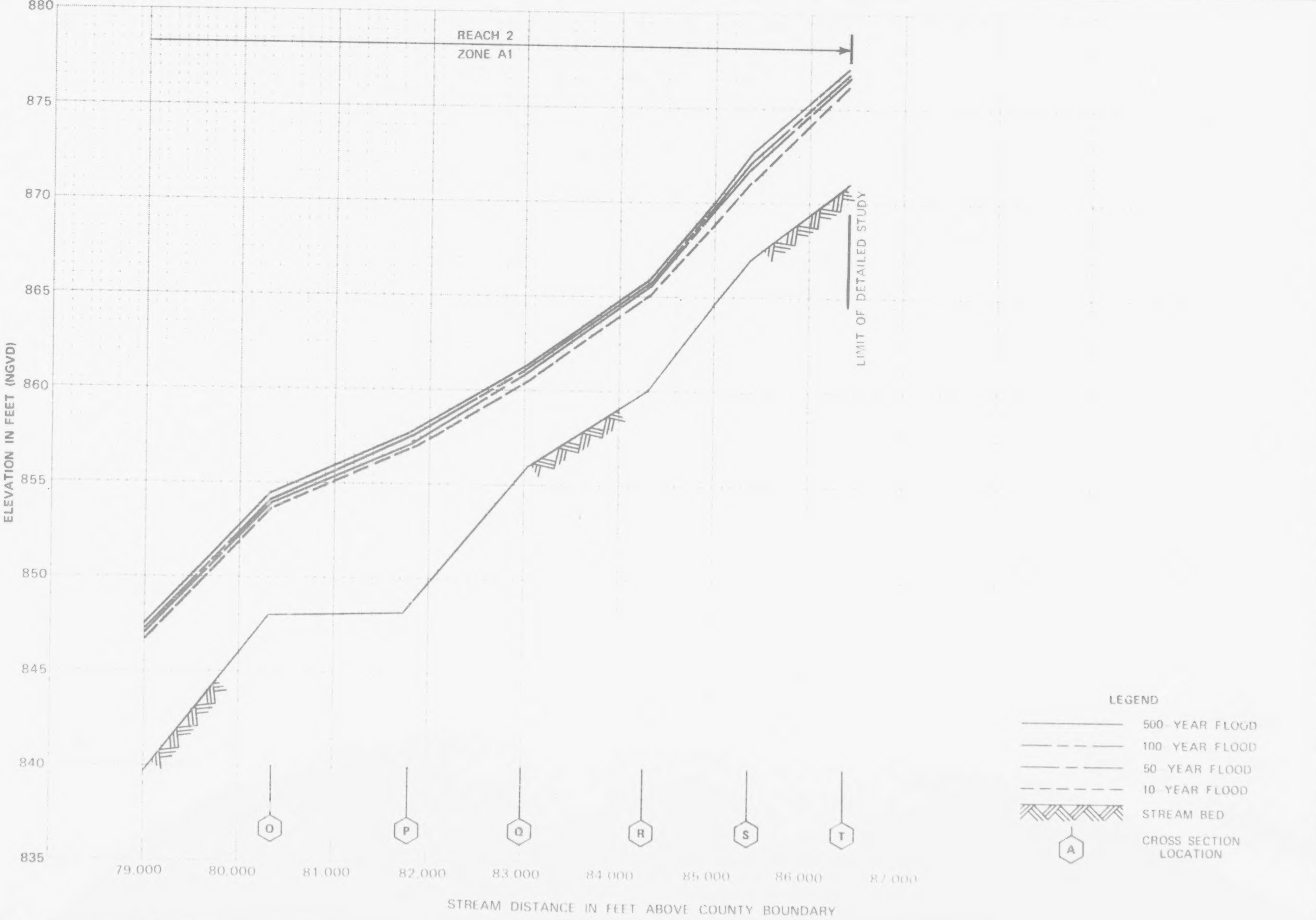
FLOOD PROFILES

HOCKING RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

05P

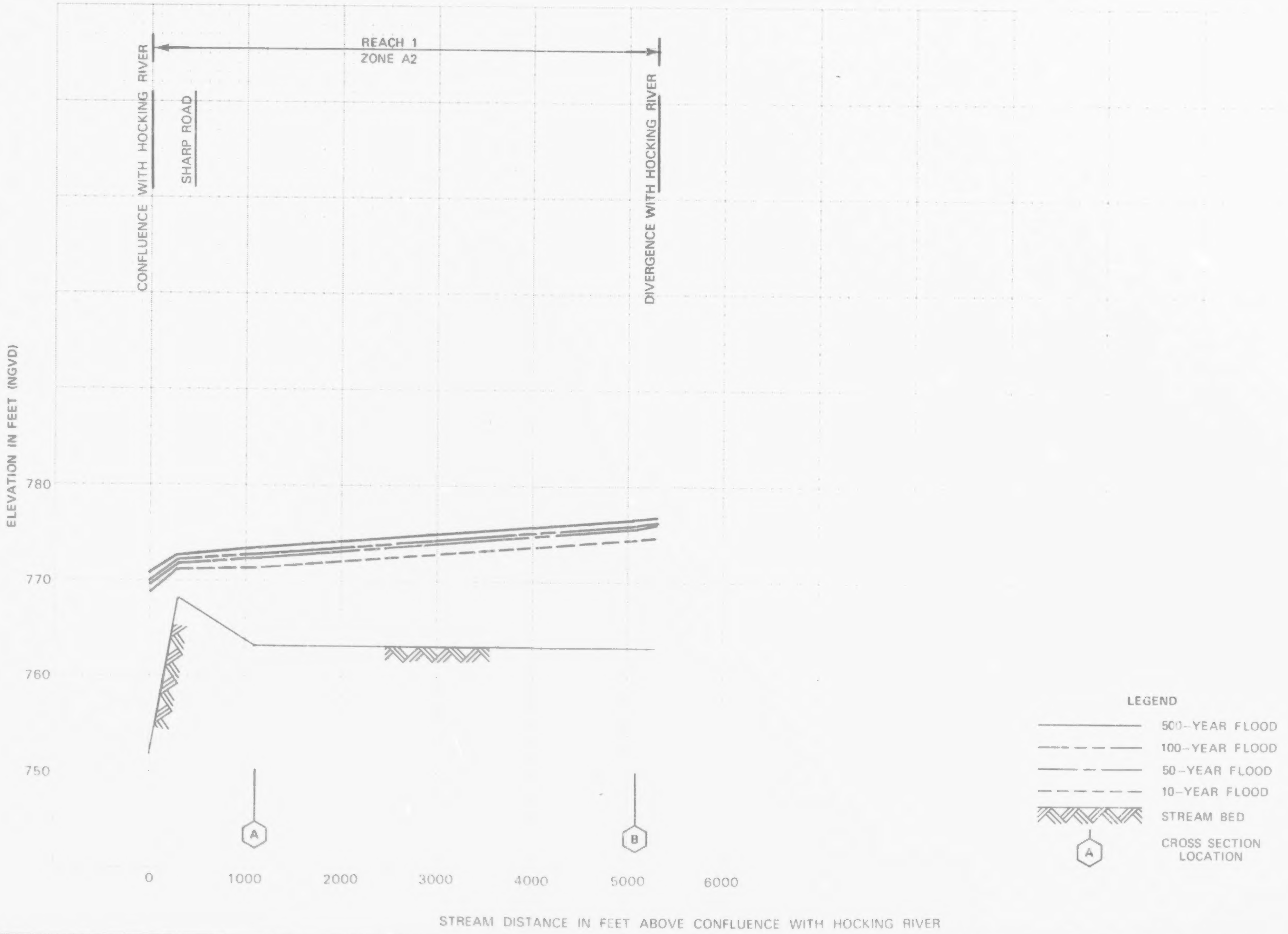


FLOOD PROFILES

HOCKING RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



FLOOD PROFILES

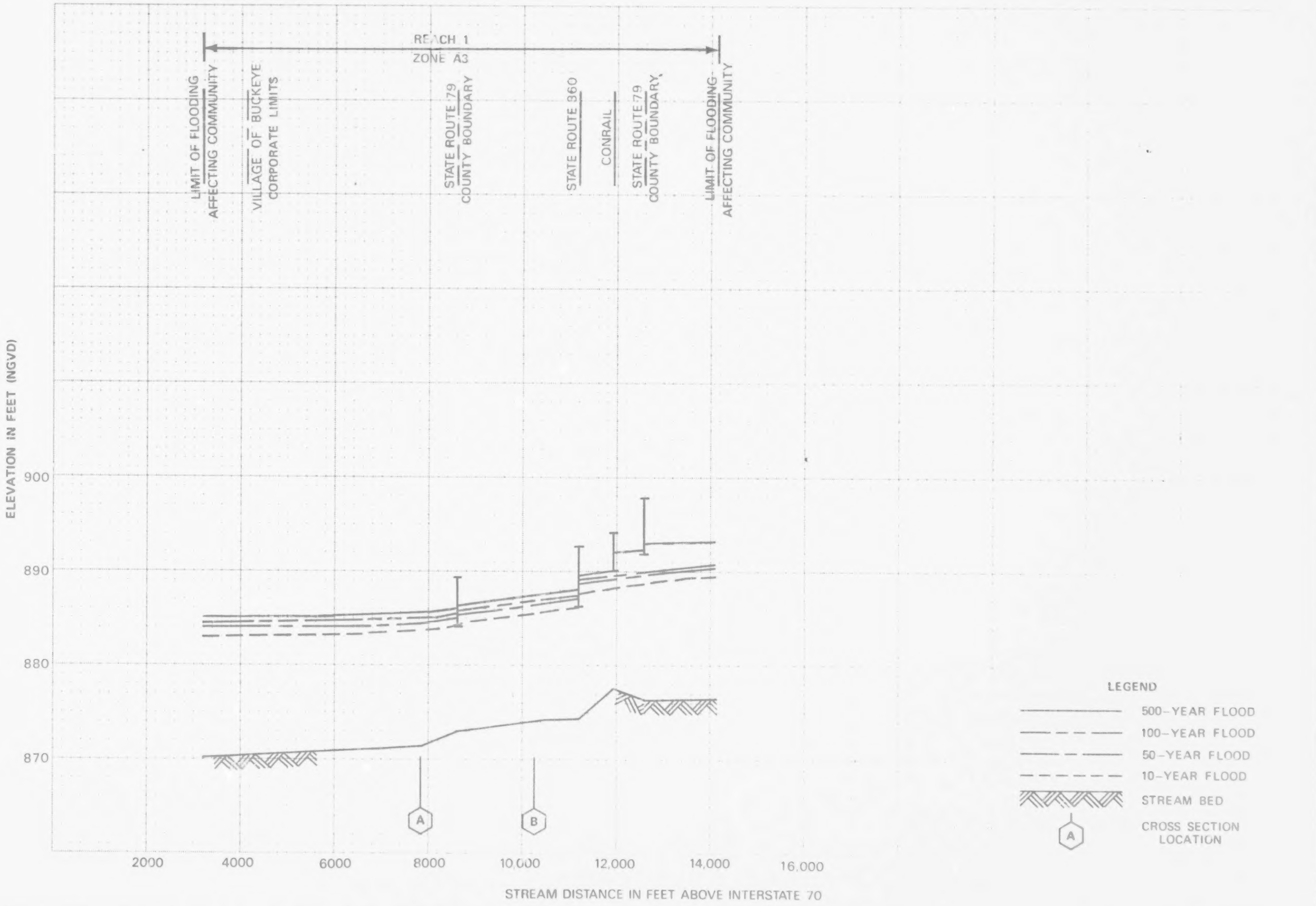
HOCKING RIVER DIVERSION

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

07P



FLOOD PROFILES

SOUTH FORK LICKING RIVER

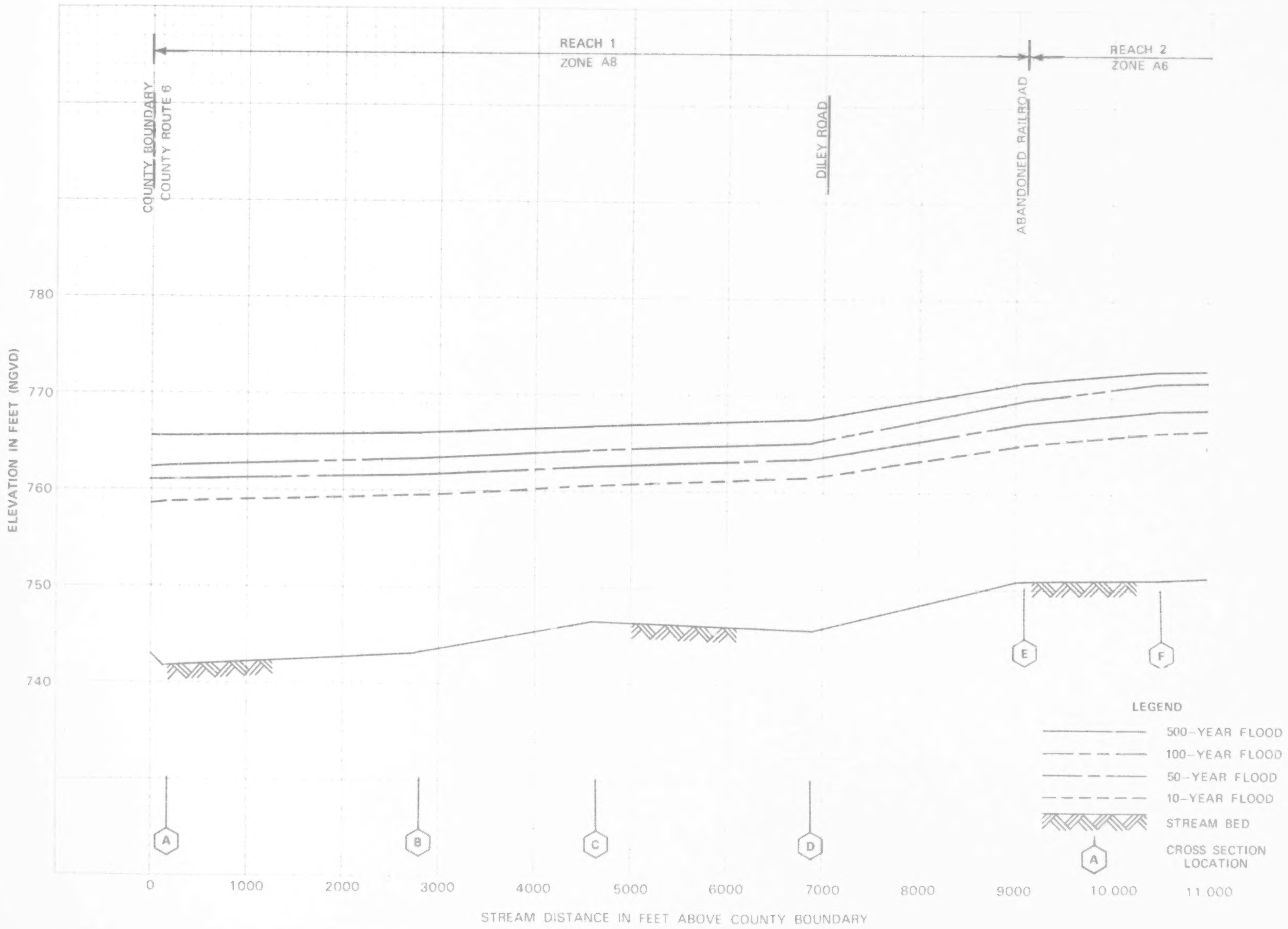
FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

08P

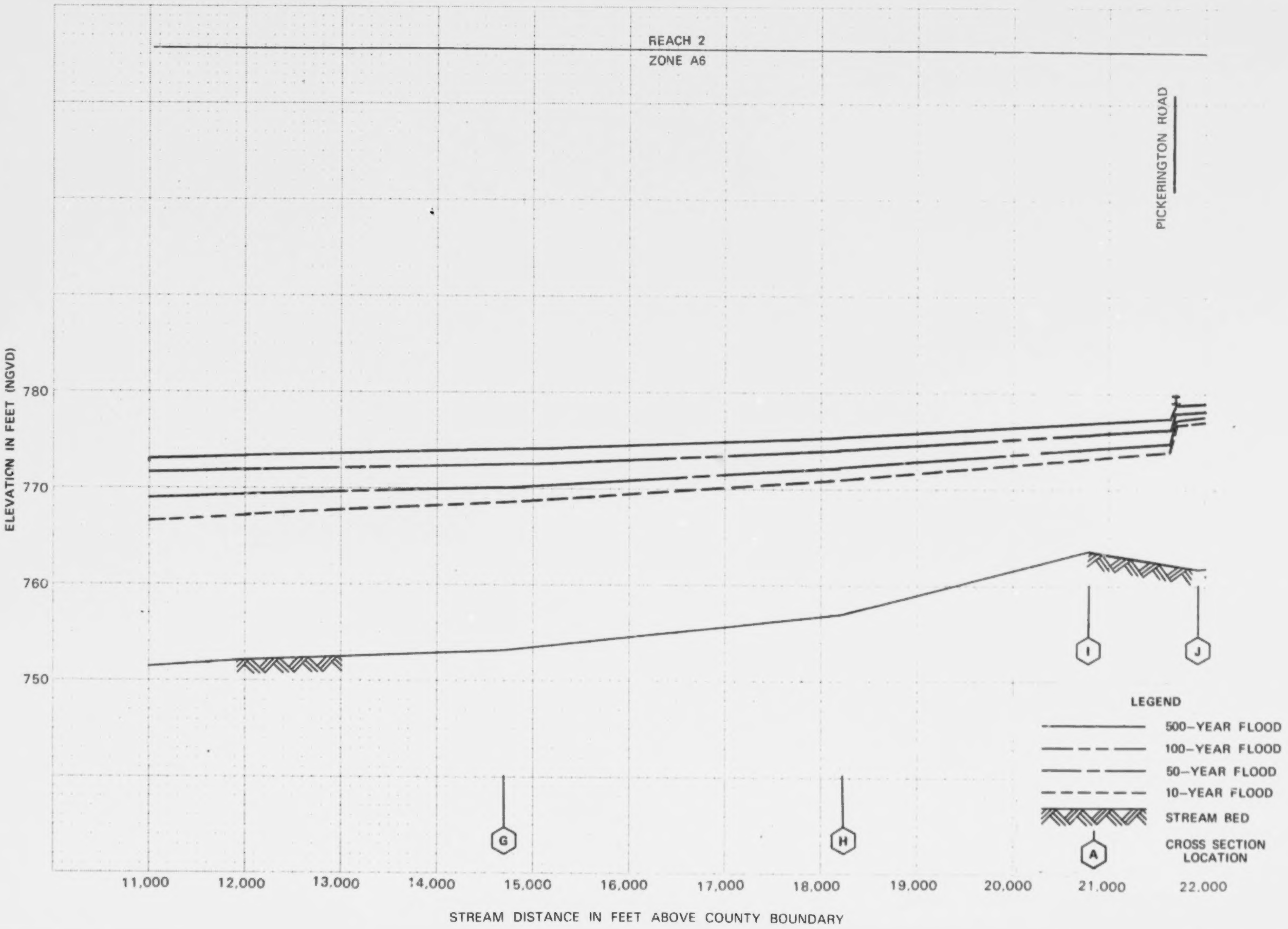
FLOOD PROFILES

WALNUT CREEK



FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



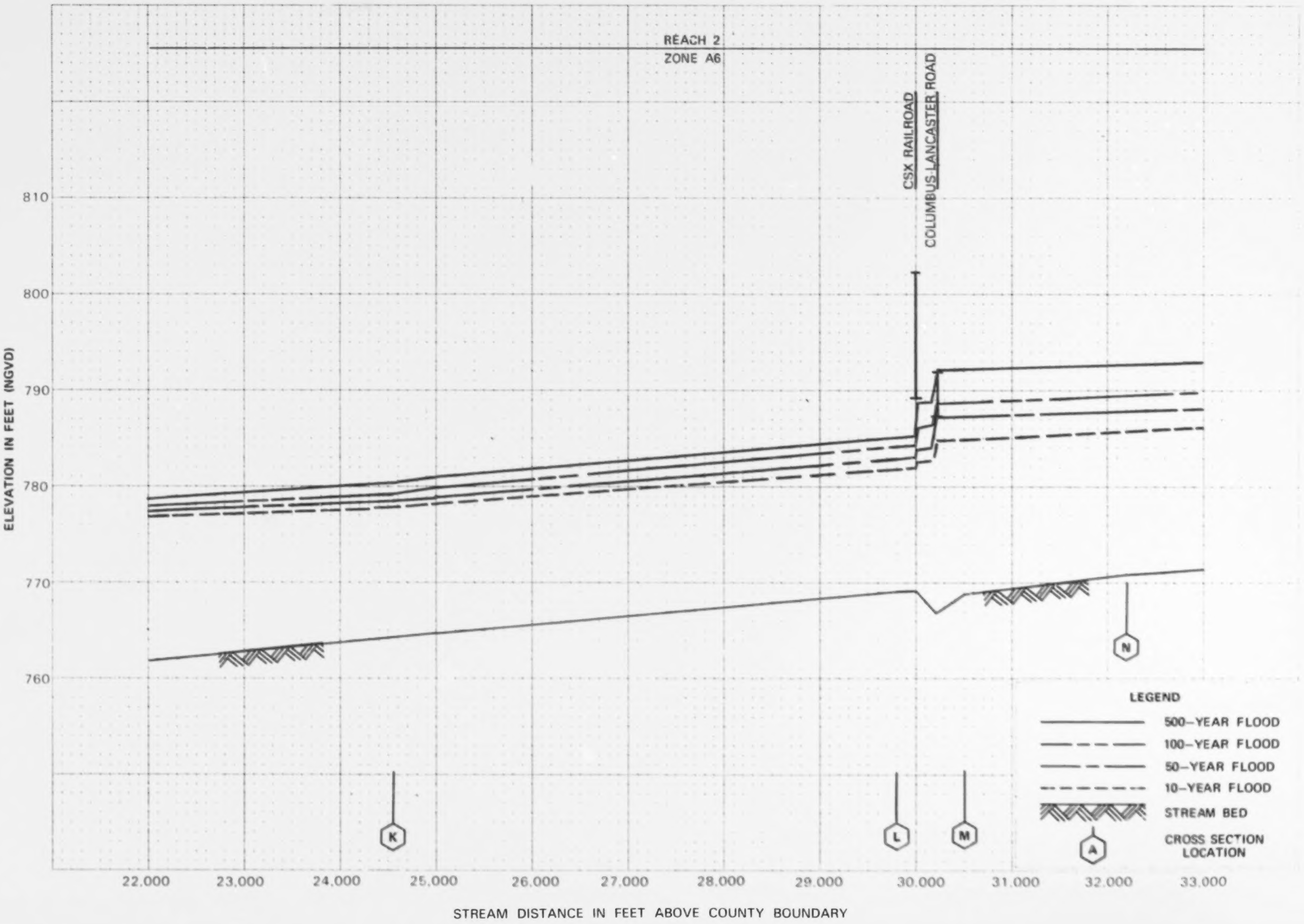
FLOOD PROFILES

WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

10P



FLOOD PROFILES

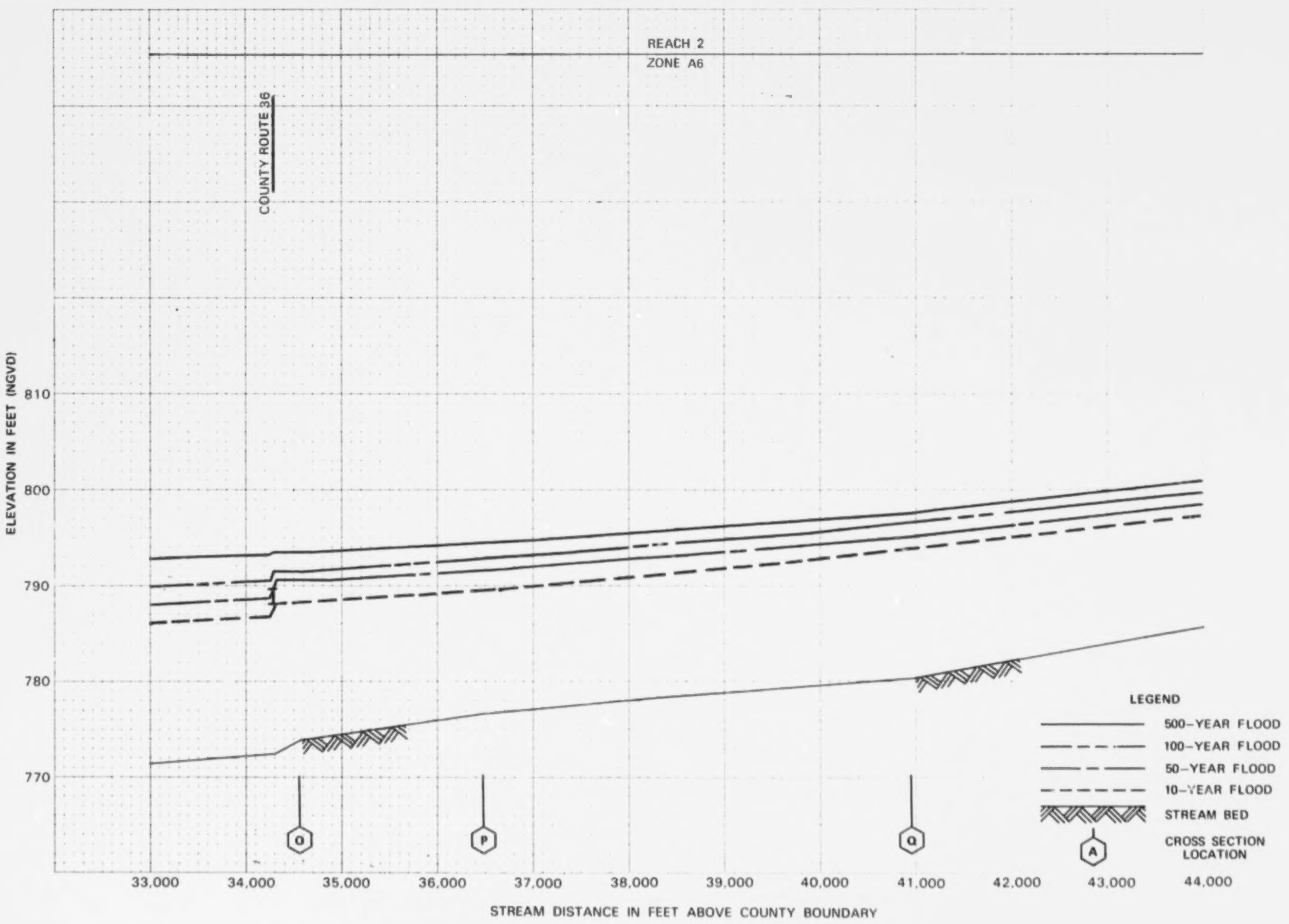
WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

11P

57

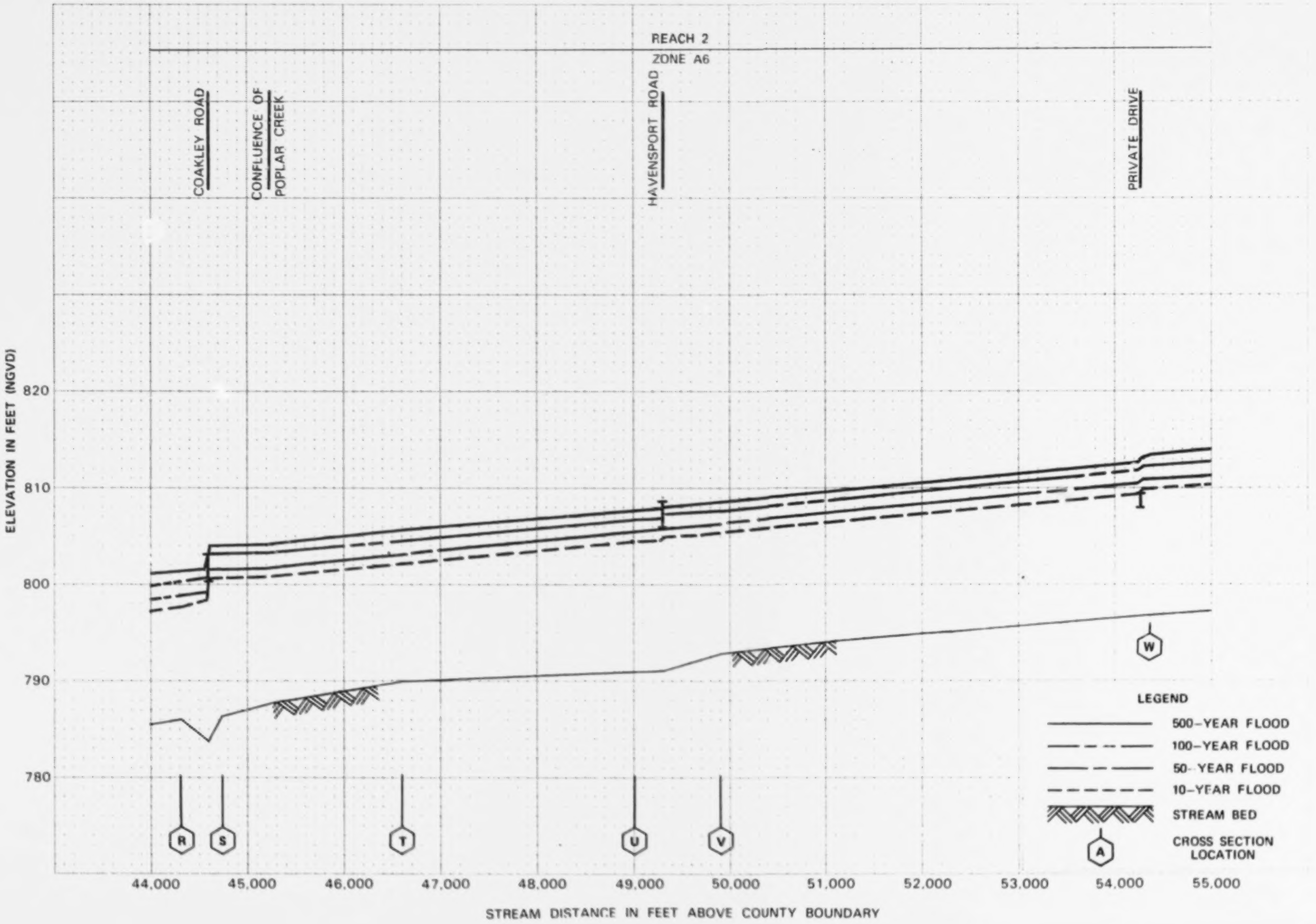


FLOOD PROFILES

WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



FLOOD PROFILES

WALNUT CREEK

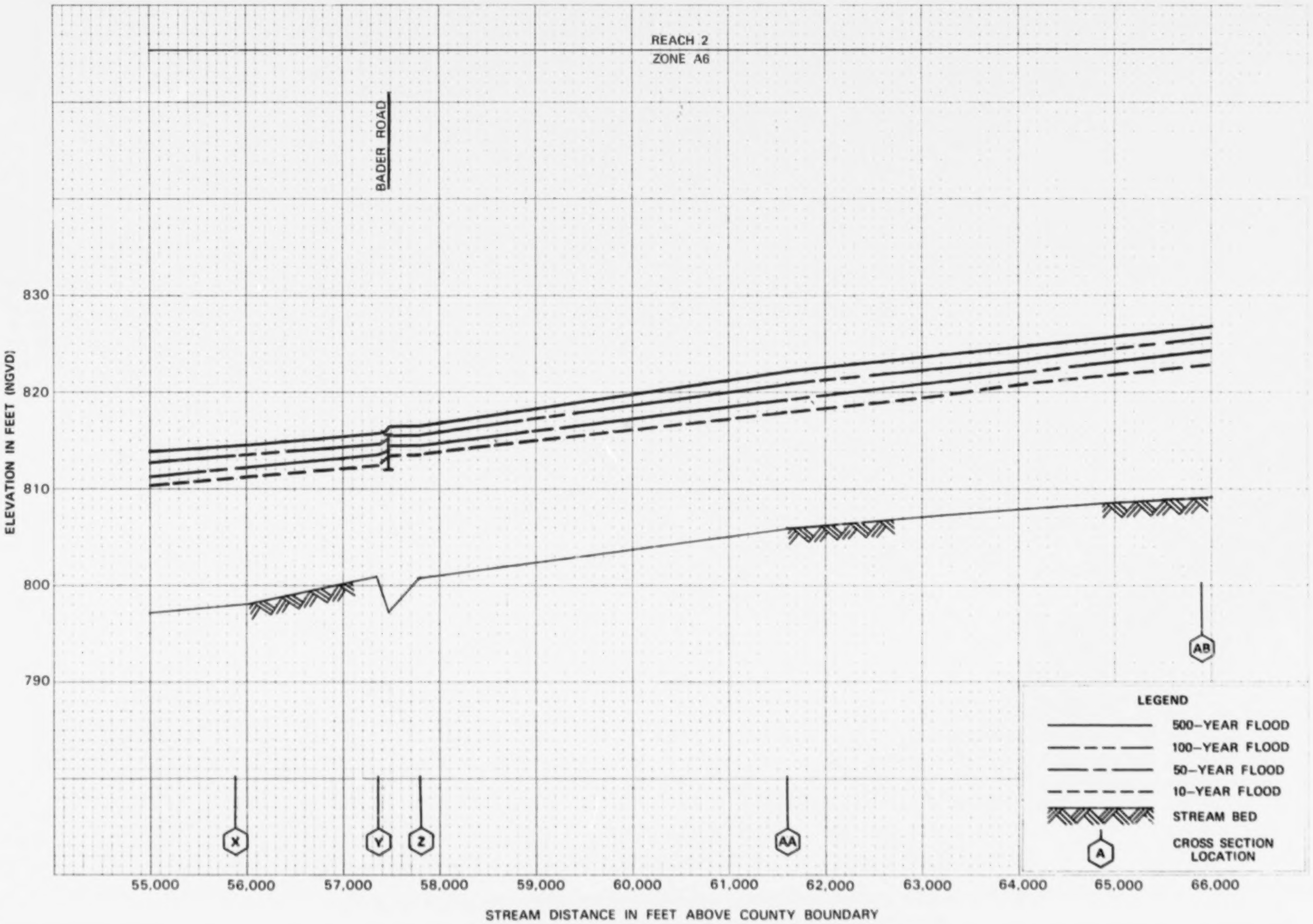
FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

13P

56



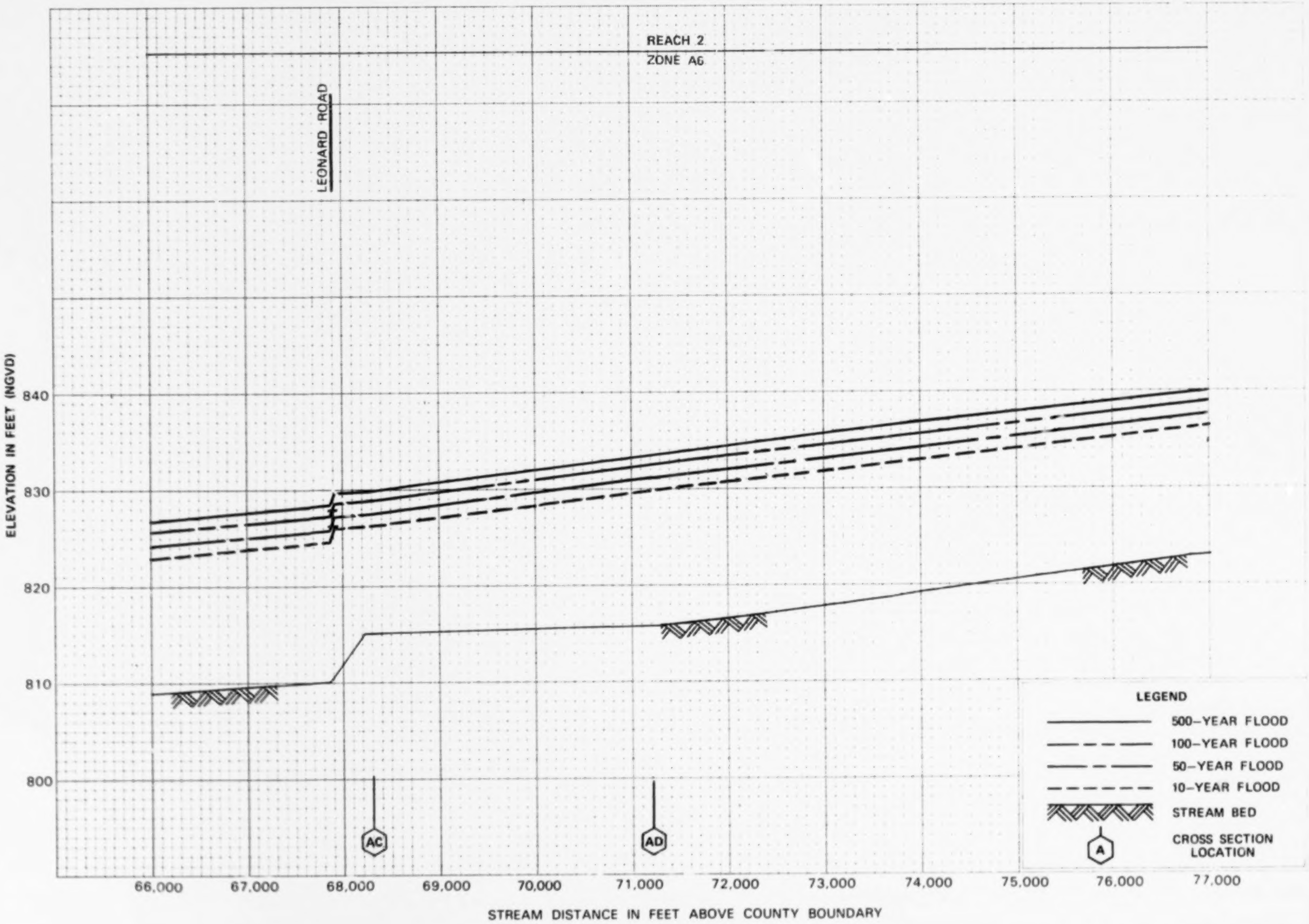
FLOOD PROFILES

WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

14P

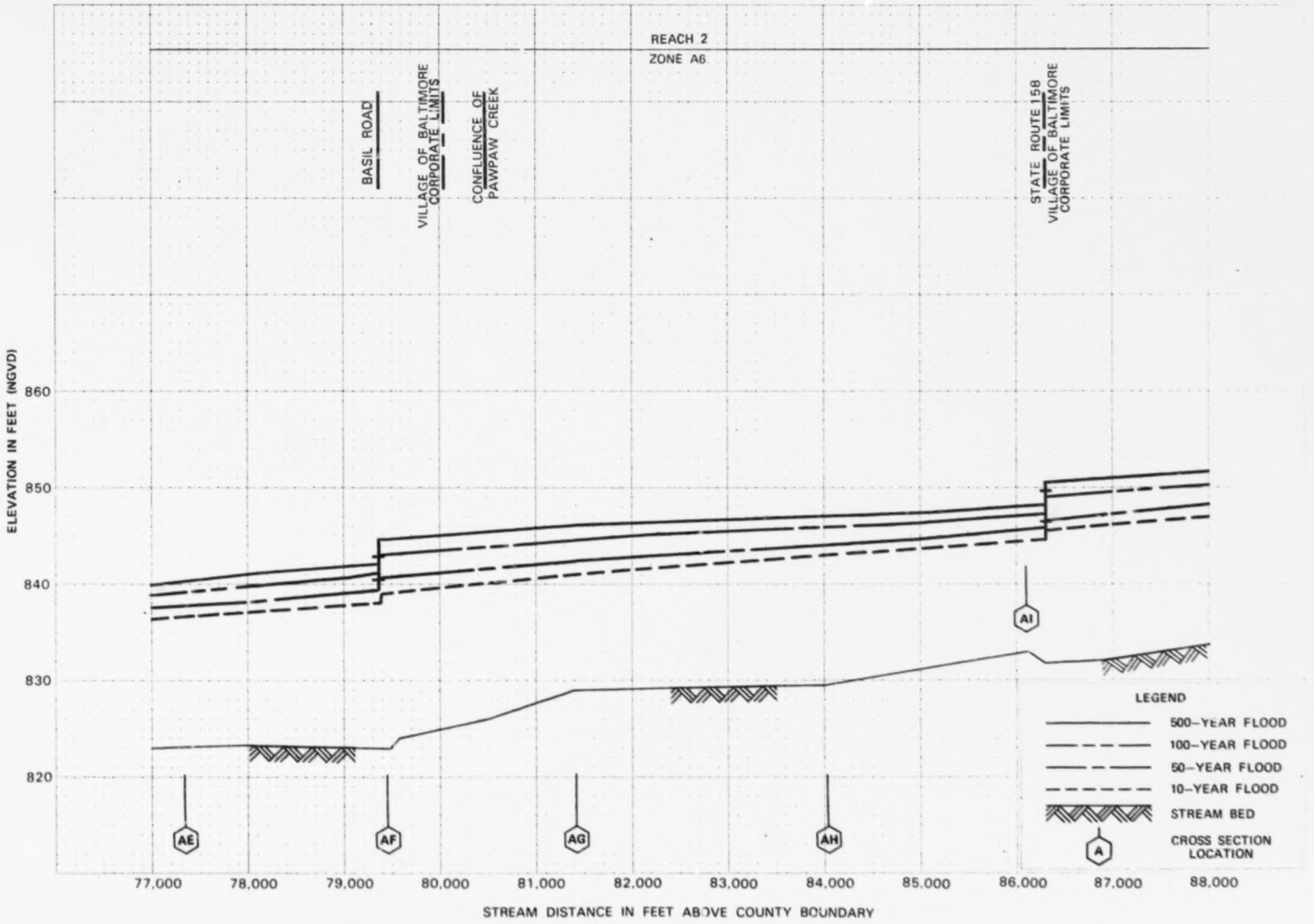


FLOOD PROFILES

WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

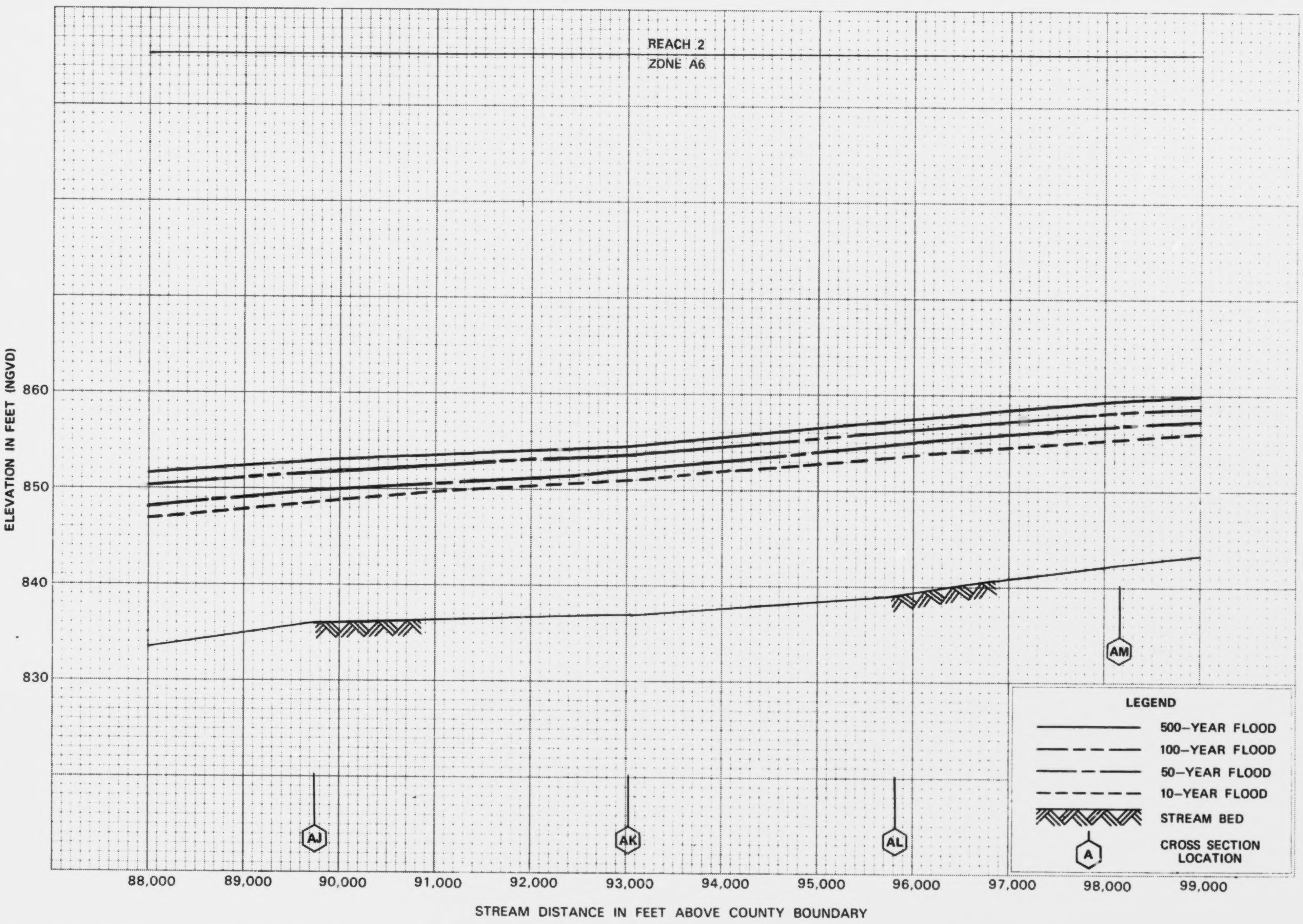


FLOOD PROFILES

WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



FLOOD PROFILES

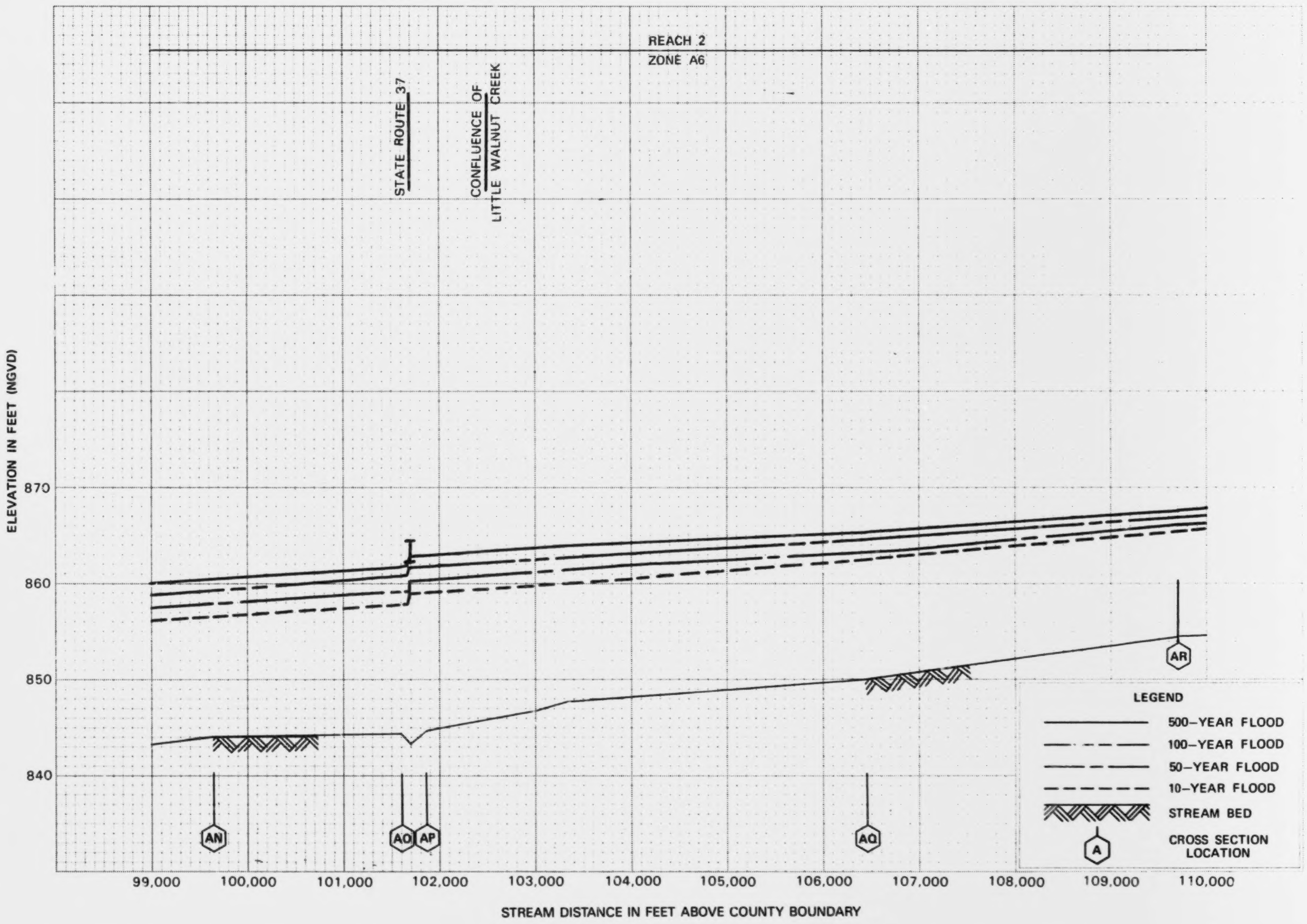
WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

17P



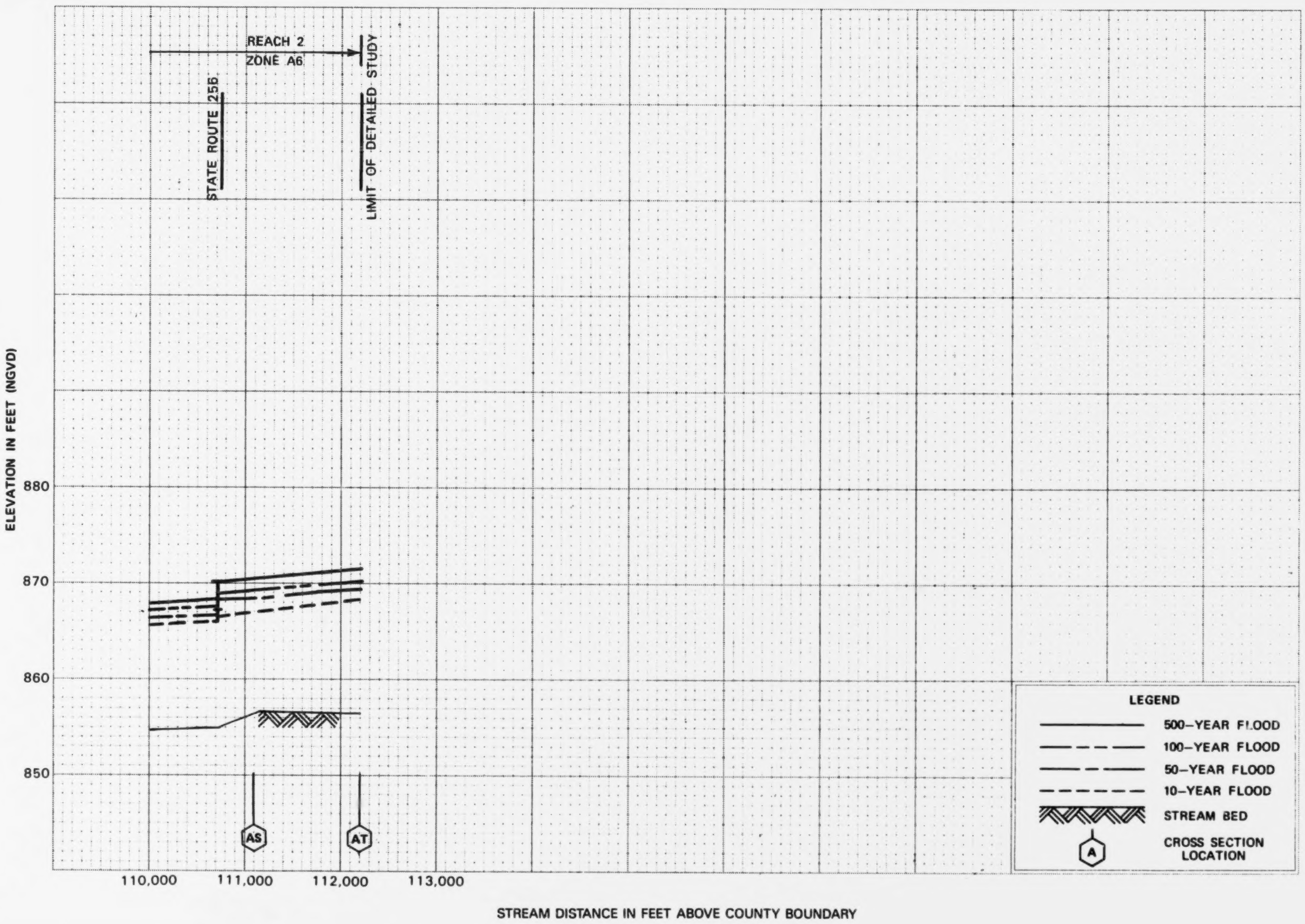
FLOOD PROFILES

WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

18P



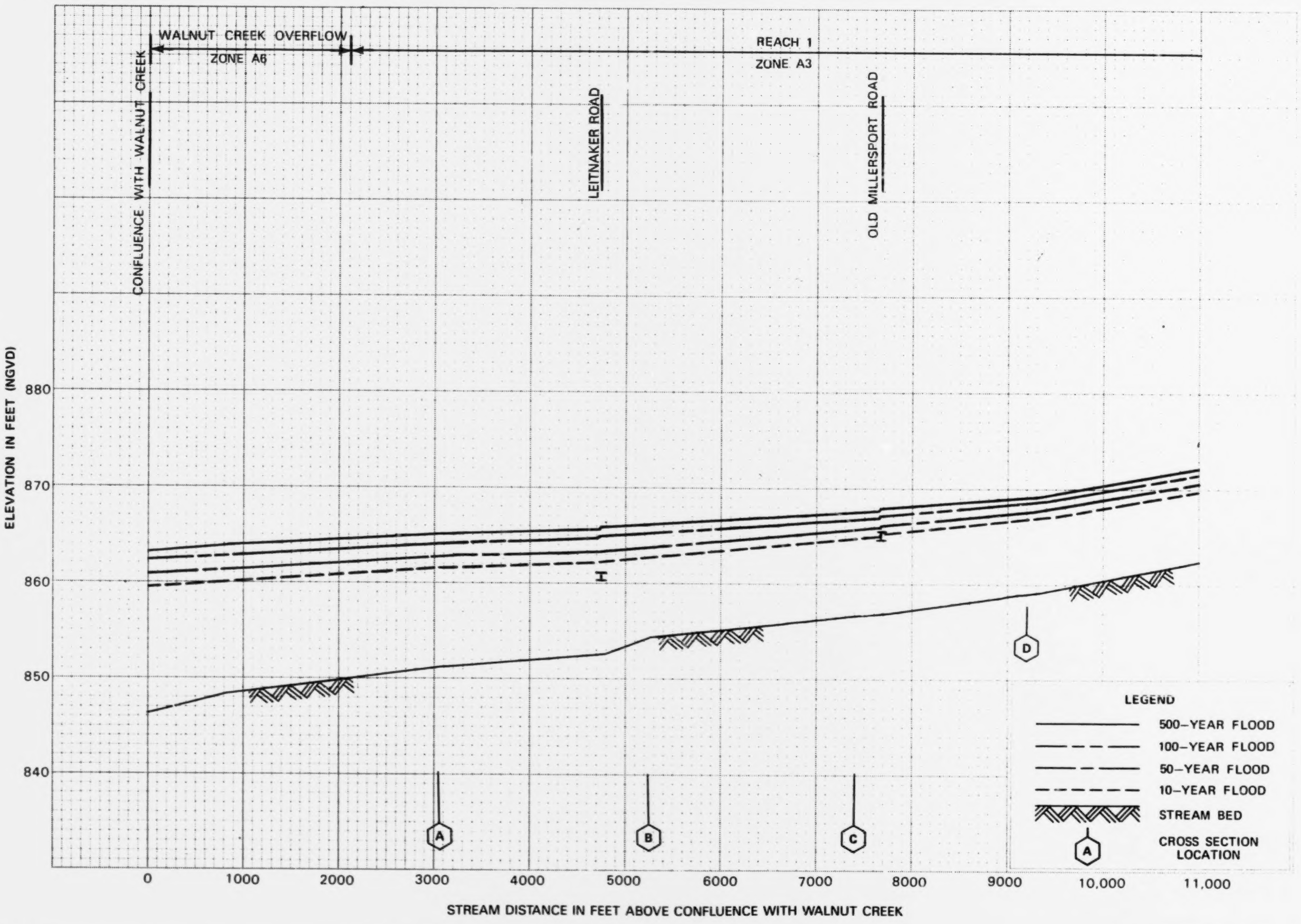
FLOOD PROFILES

WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

19P



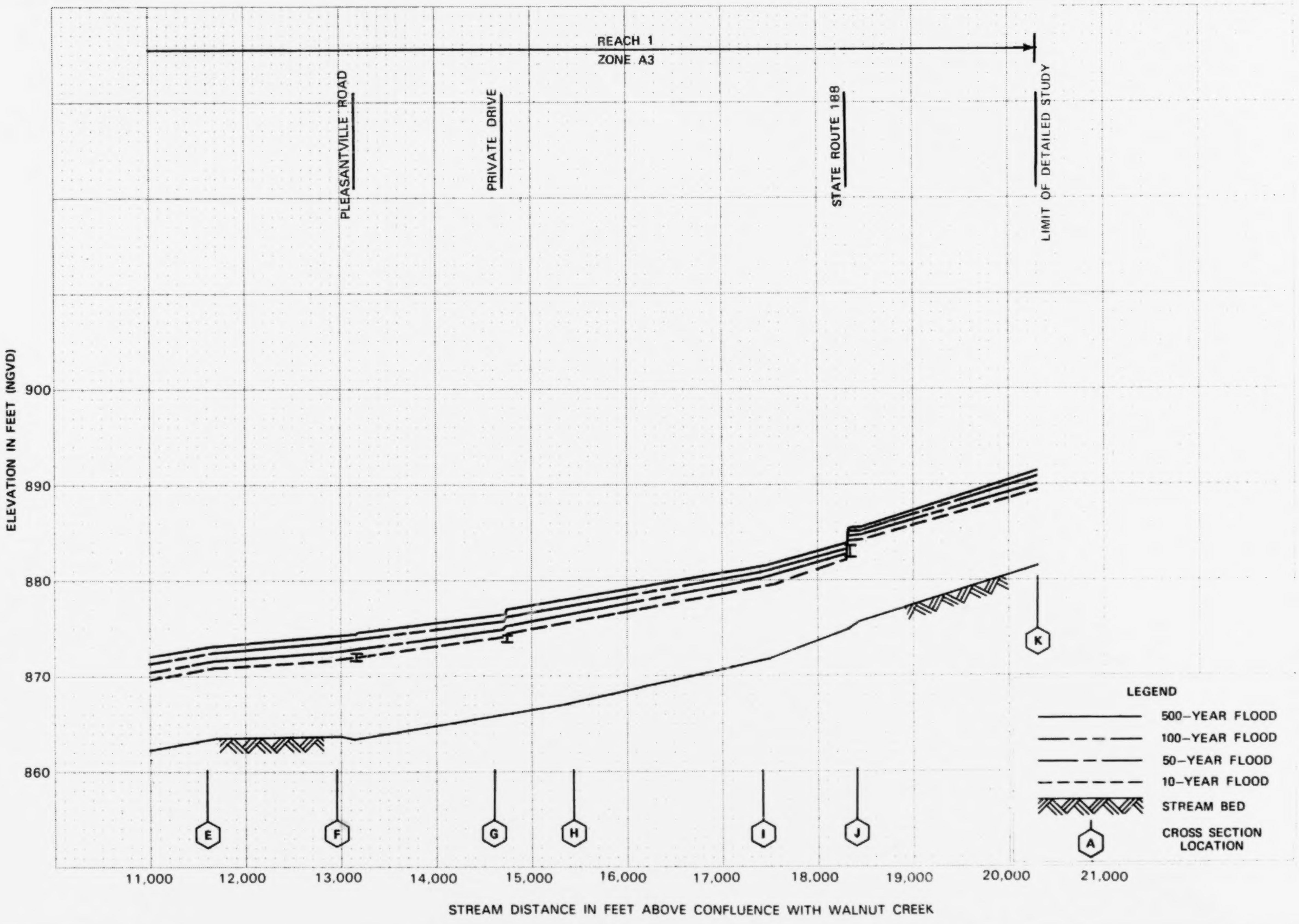
FLOOD PROFILES

LITTLE WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

20P



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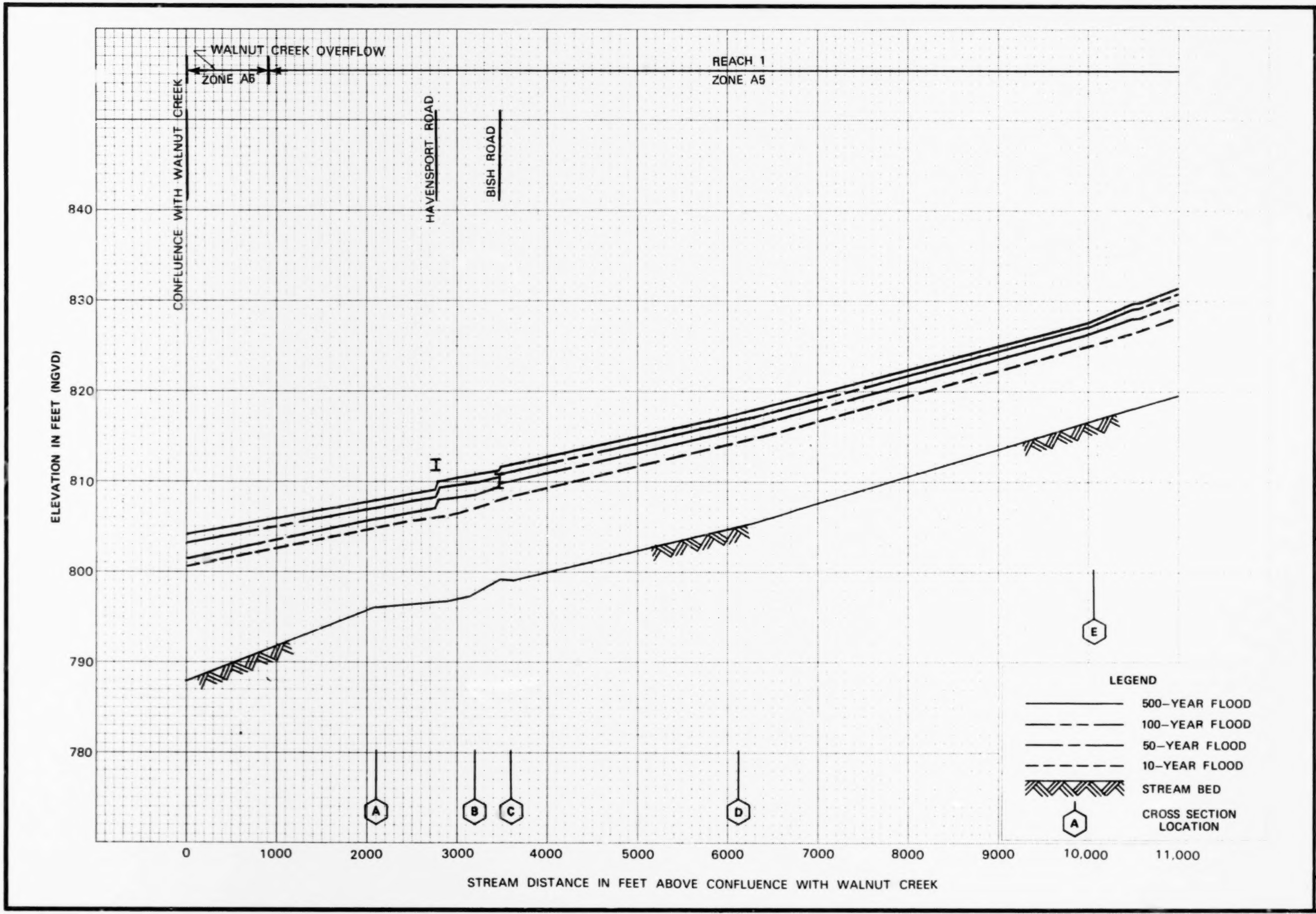
LITTLE WALNUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



FLOOD PROFILES

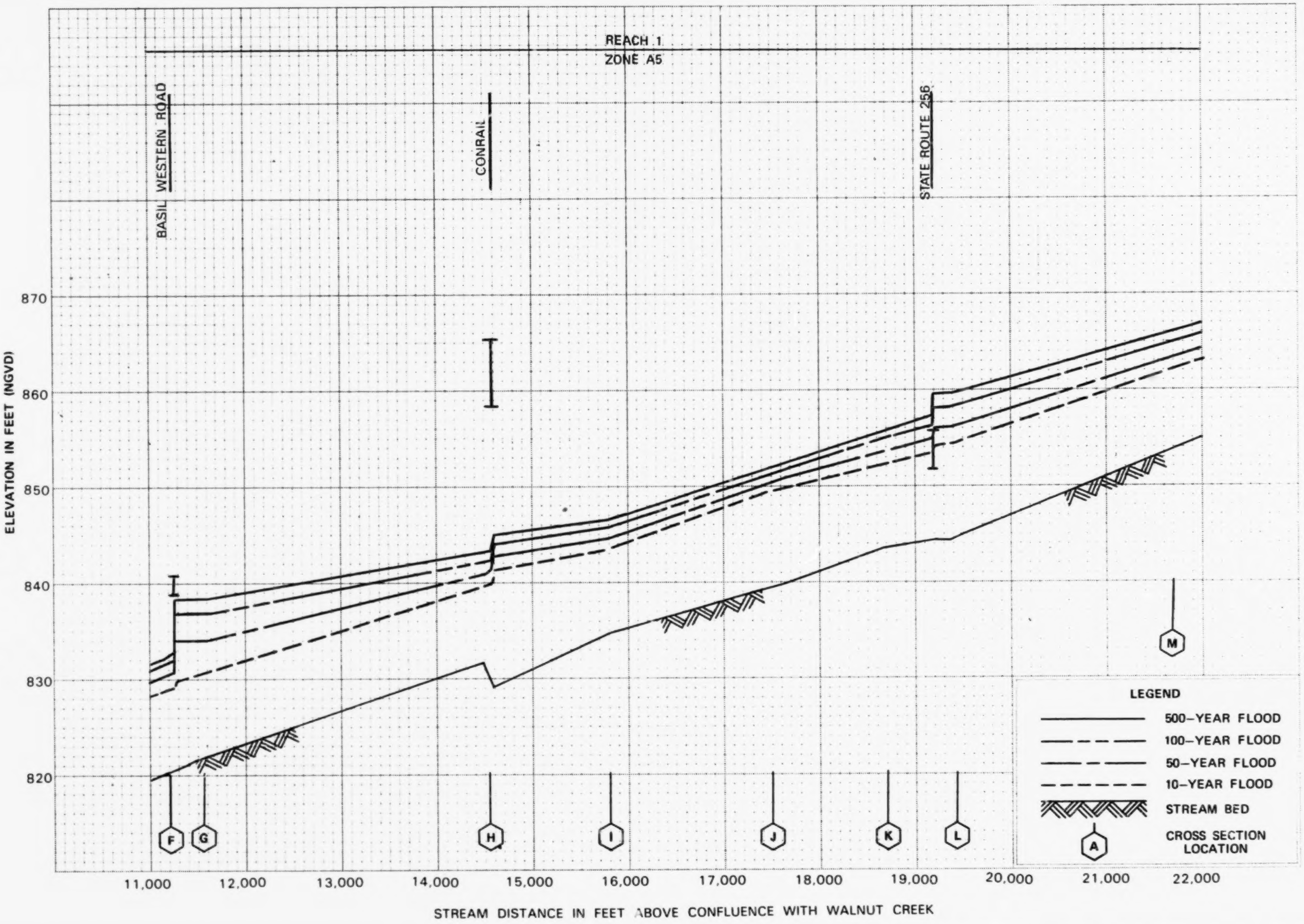
POPLAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

22P

65

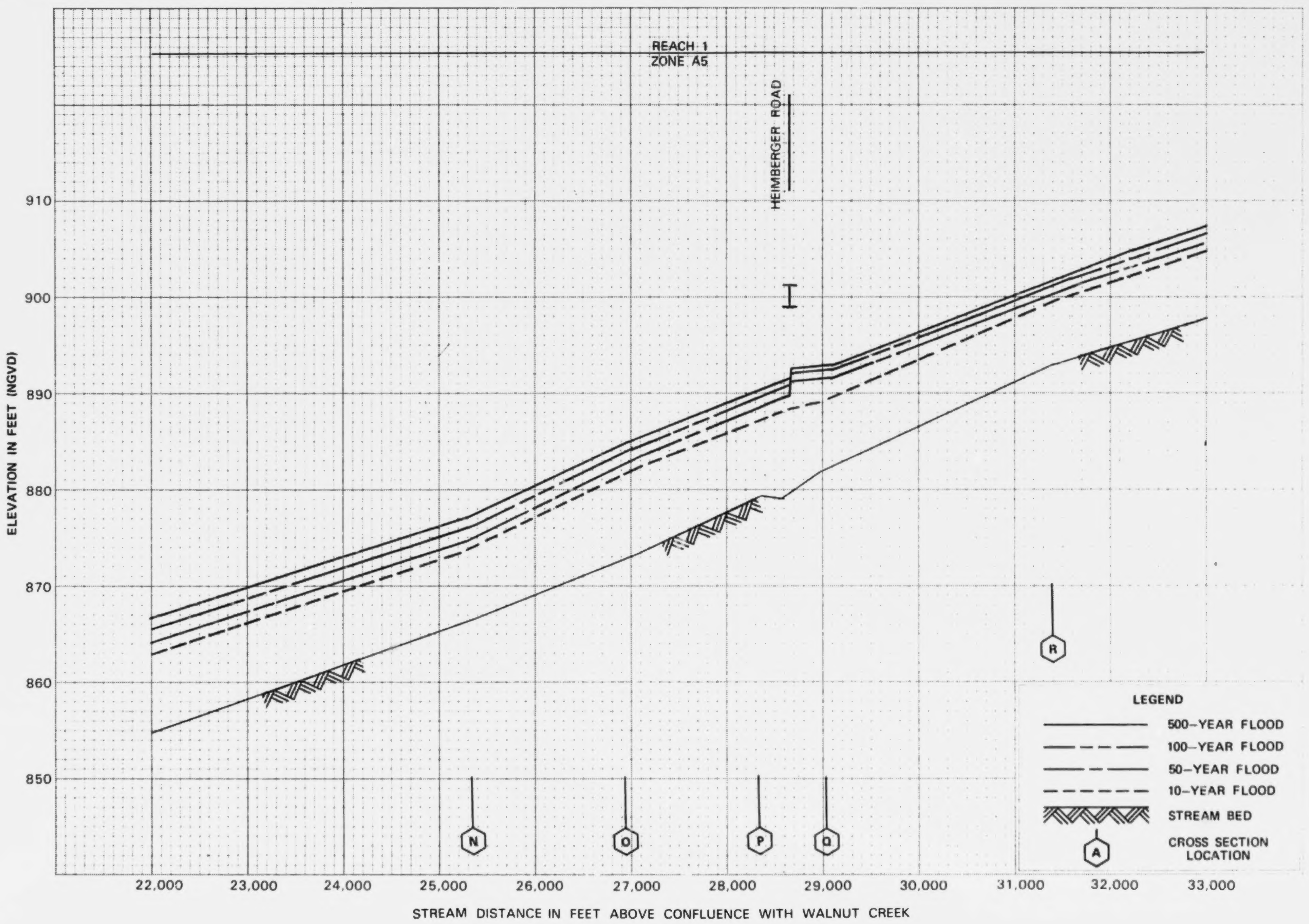


FLOOD PROFILES

POPLAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



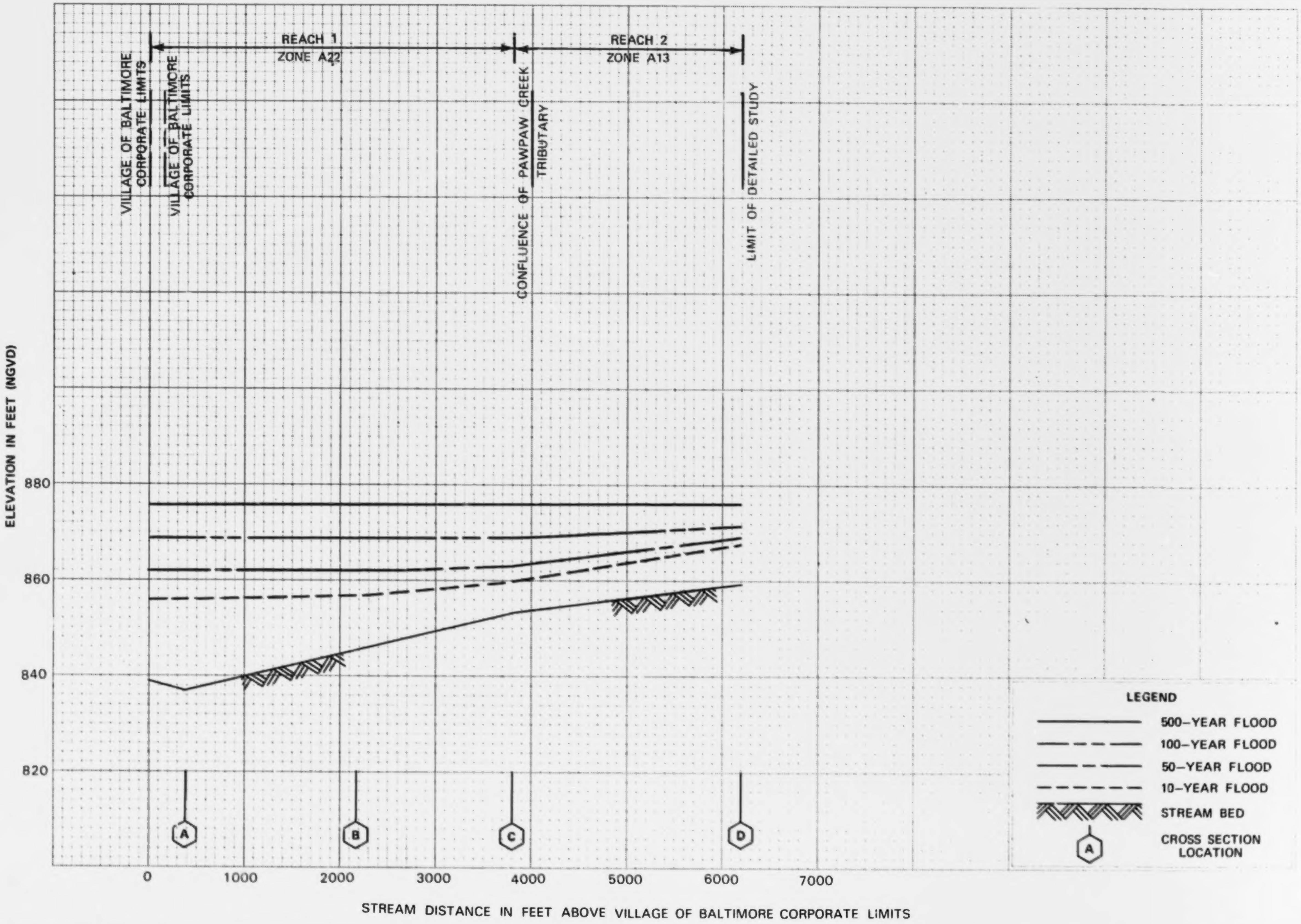
FLOOD PROFILES

POPLAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

24P

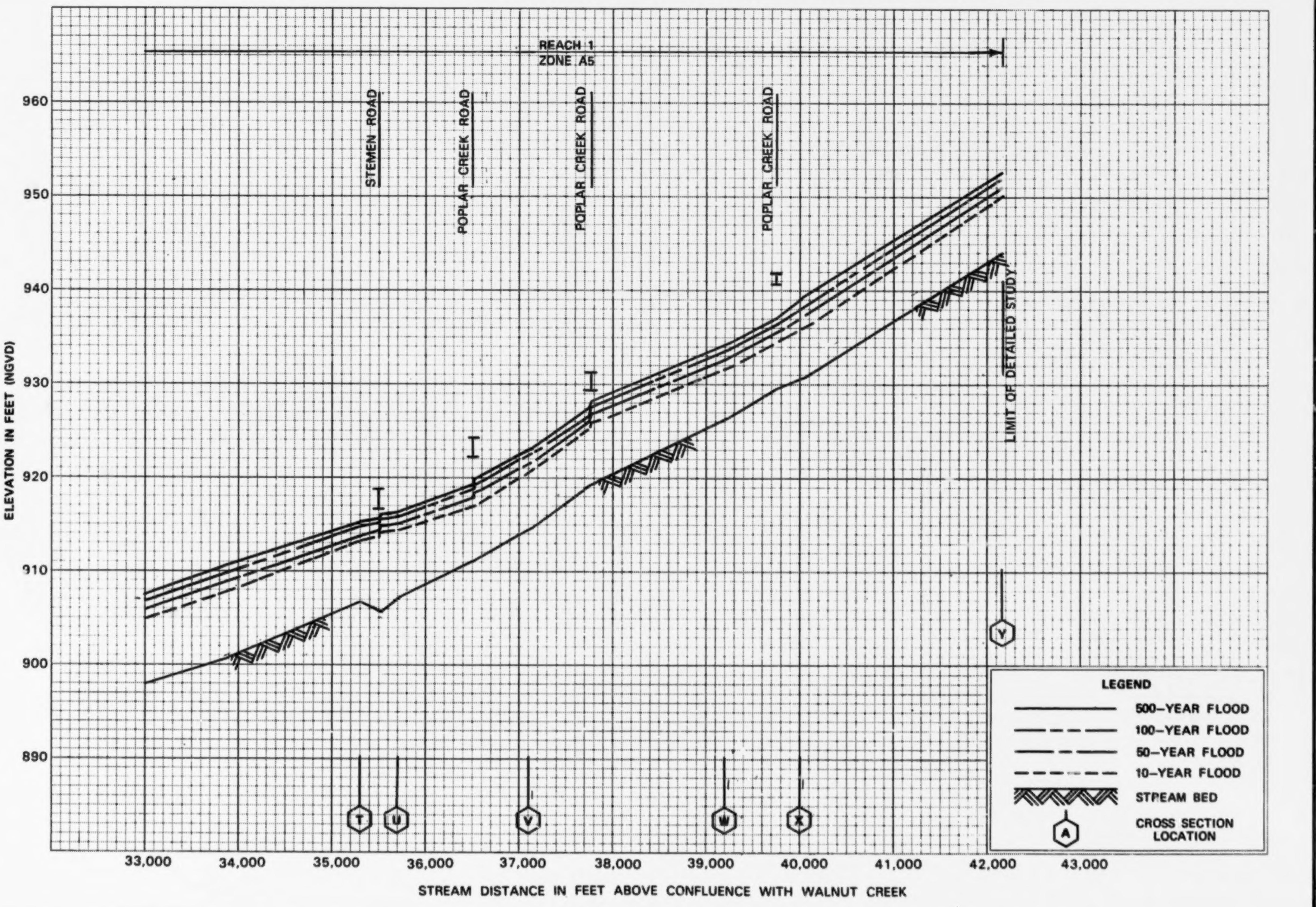


FLOOD PROFILES

PAWPAW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



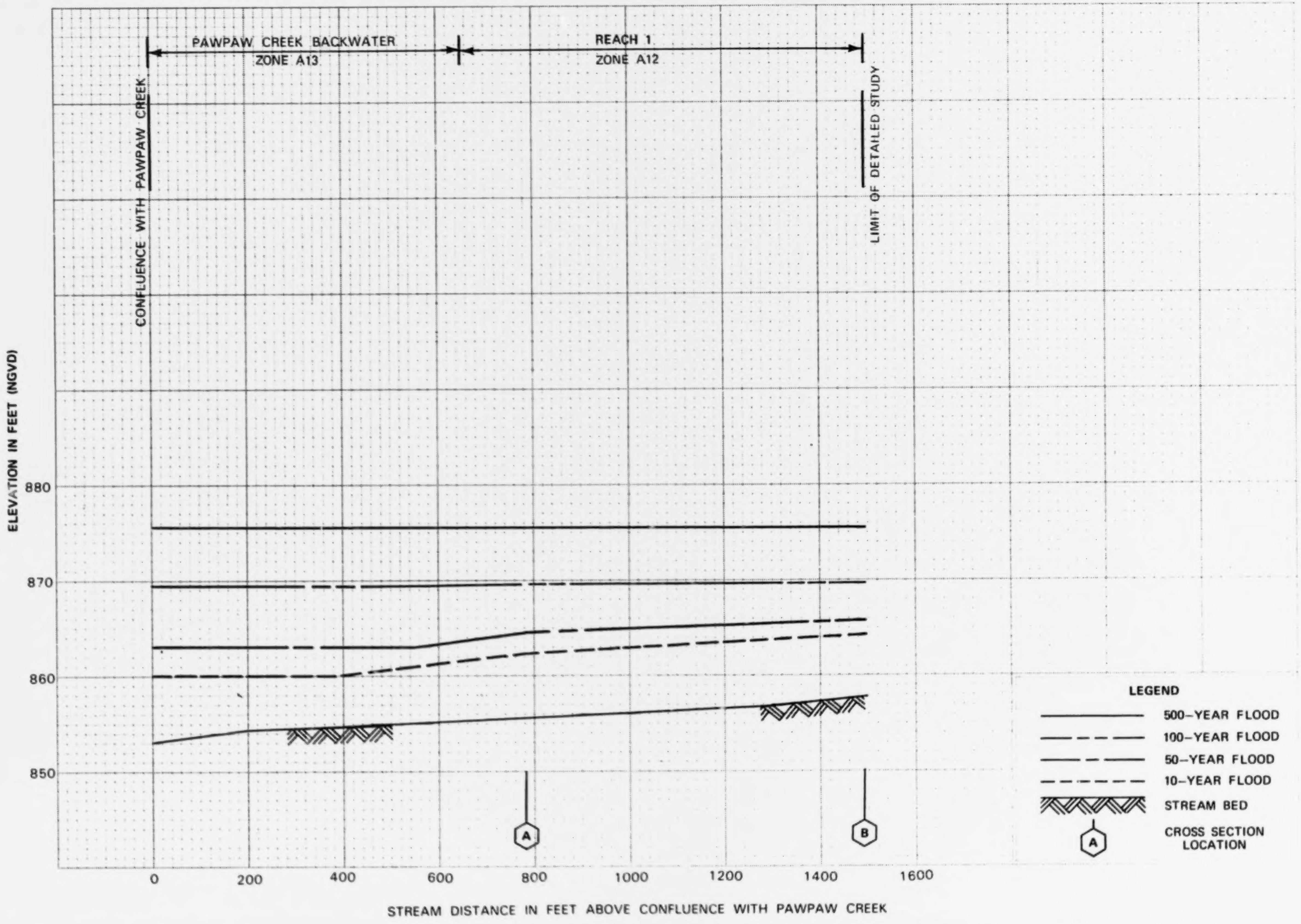
FLOOD PROFILES

POPLAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

25P



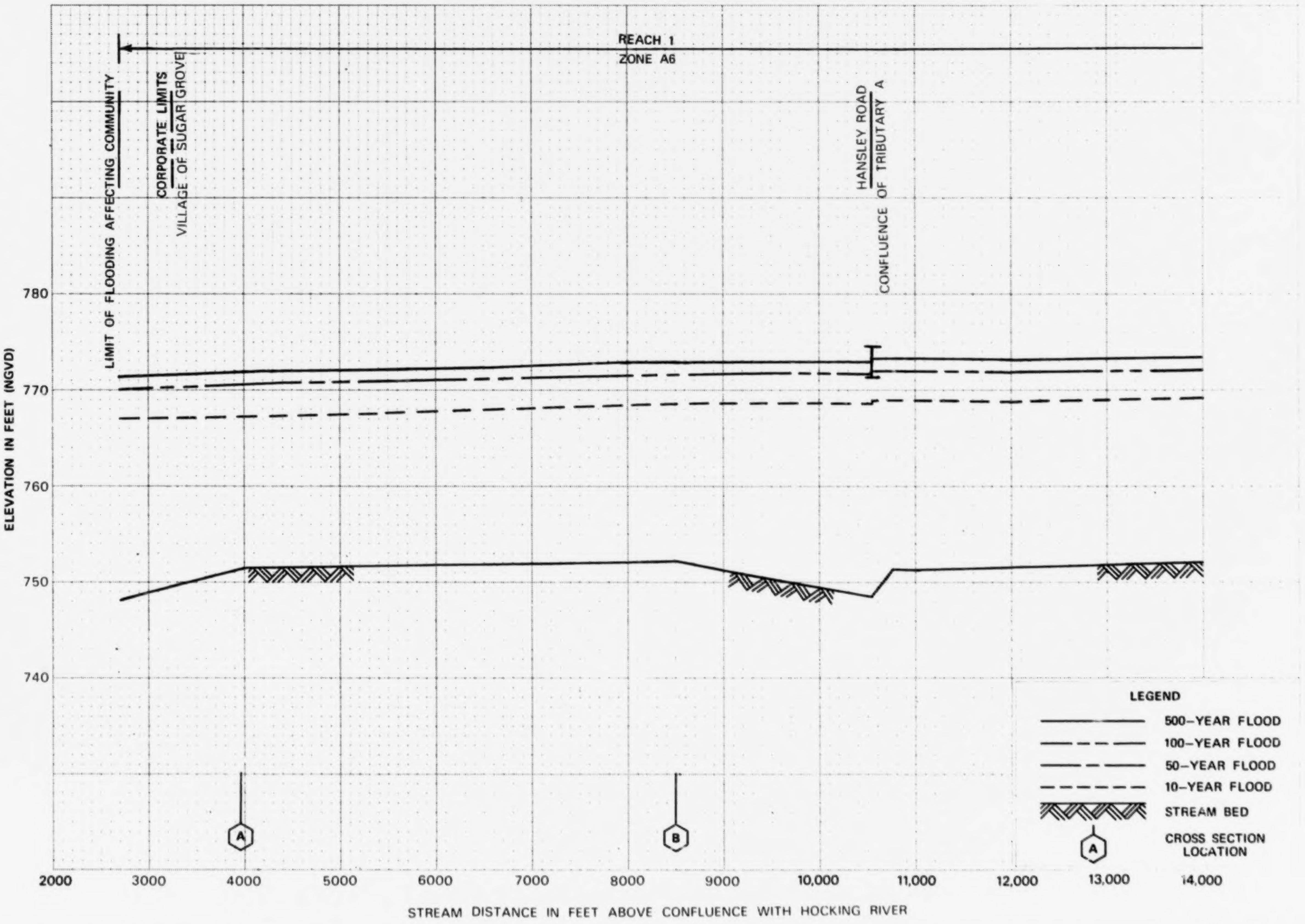
FLOOD PROFILES

PAWPAW CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

27P



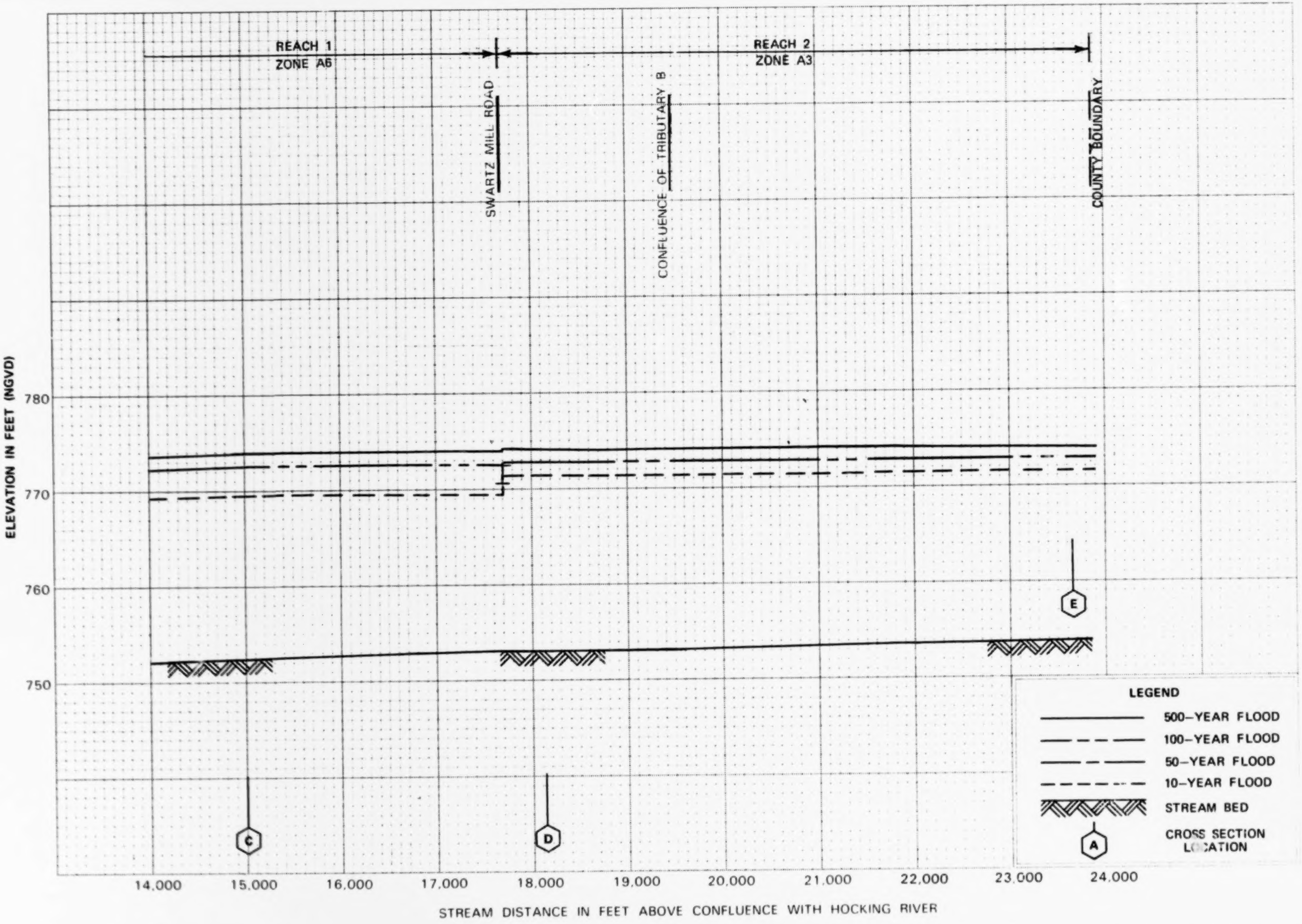
FLOOD PROFILES

RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

28P



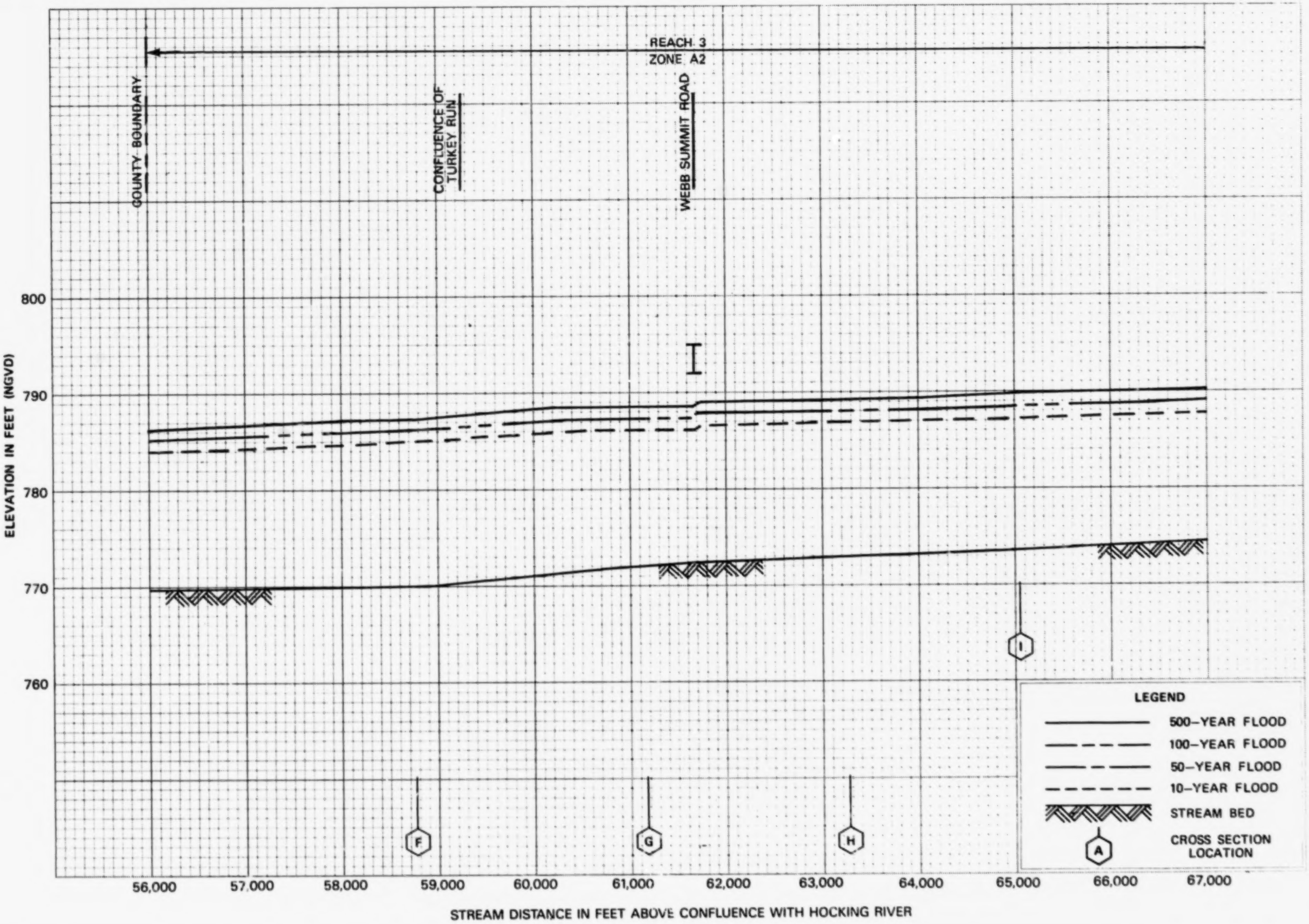
FLOOD PROFILES

RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

29P

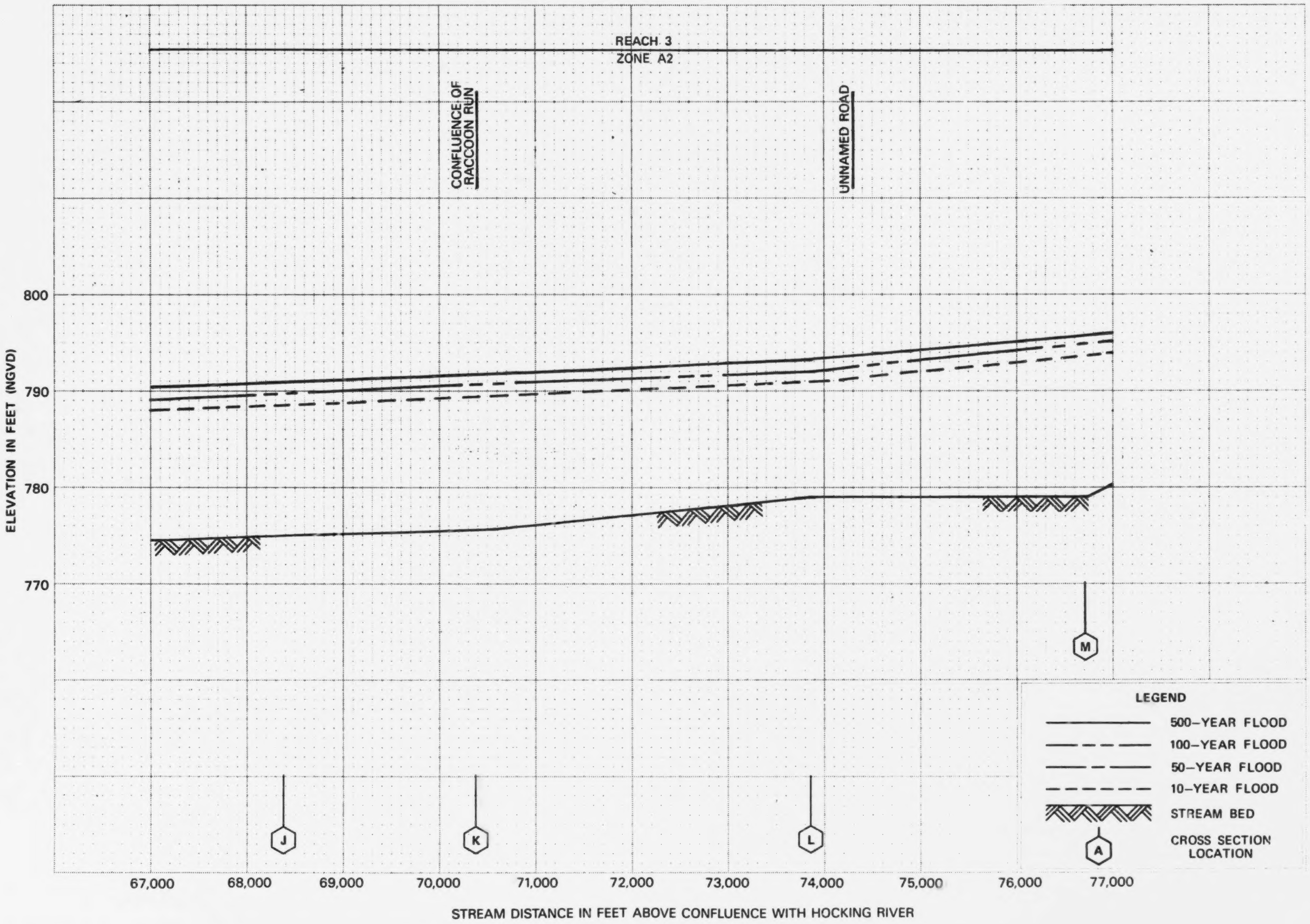


FLOOD PROFILES

RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



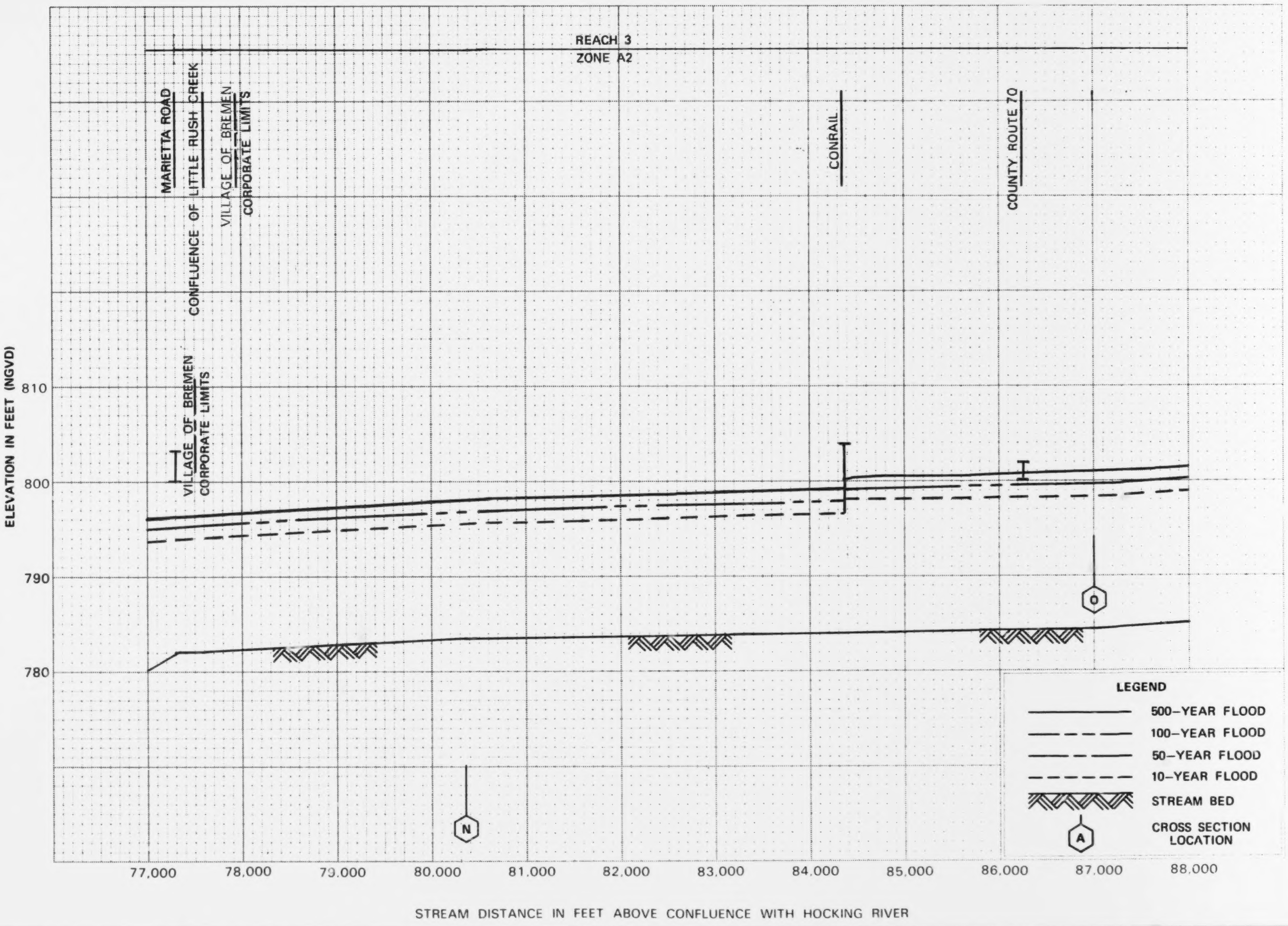
FLOOD PROFILES

RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

24

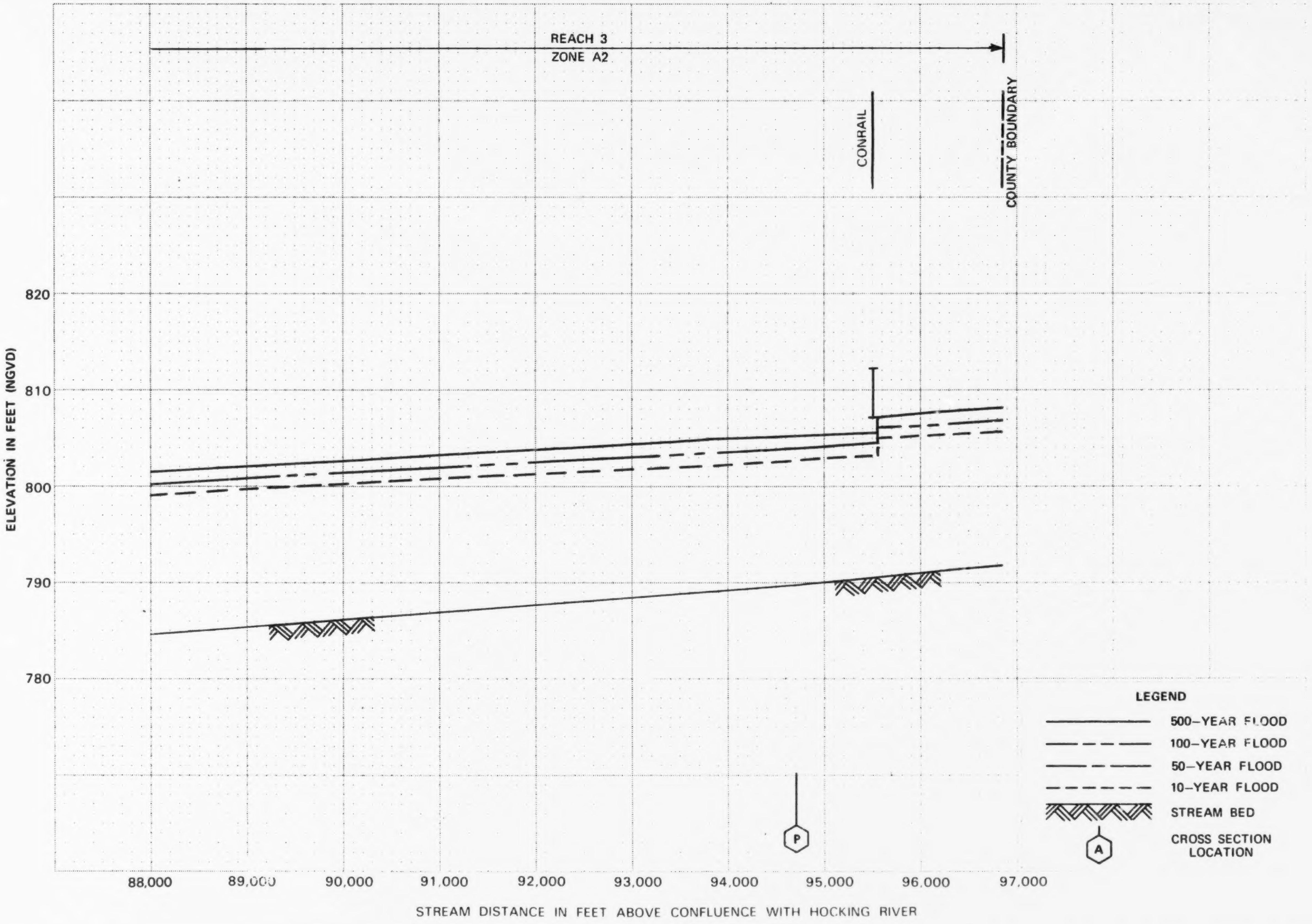


FLOOD PROFILES

RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



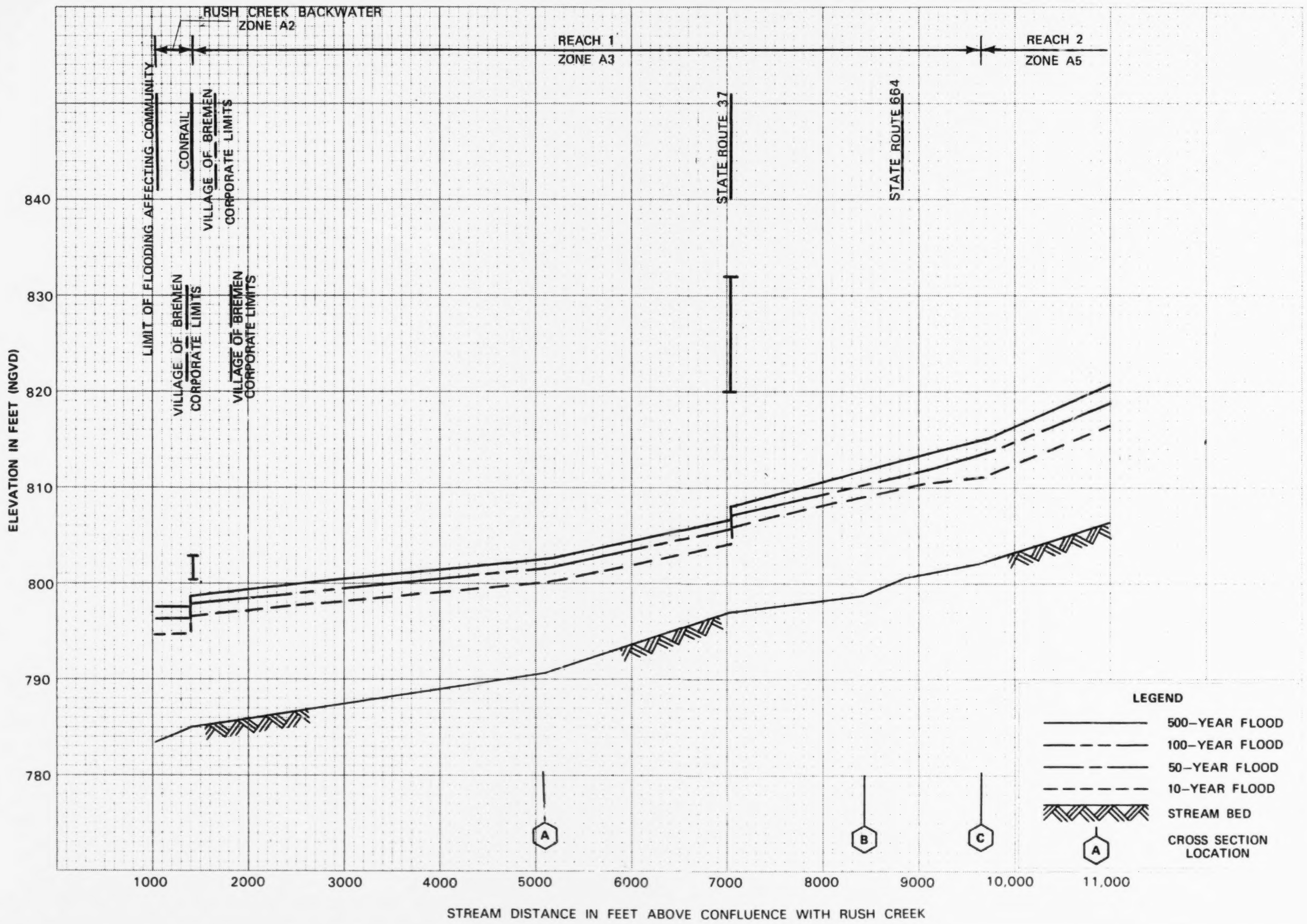
FLOOD PROFILES

RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

33P

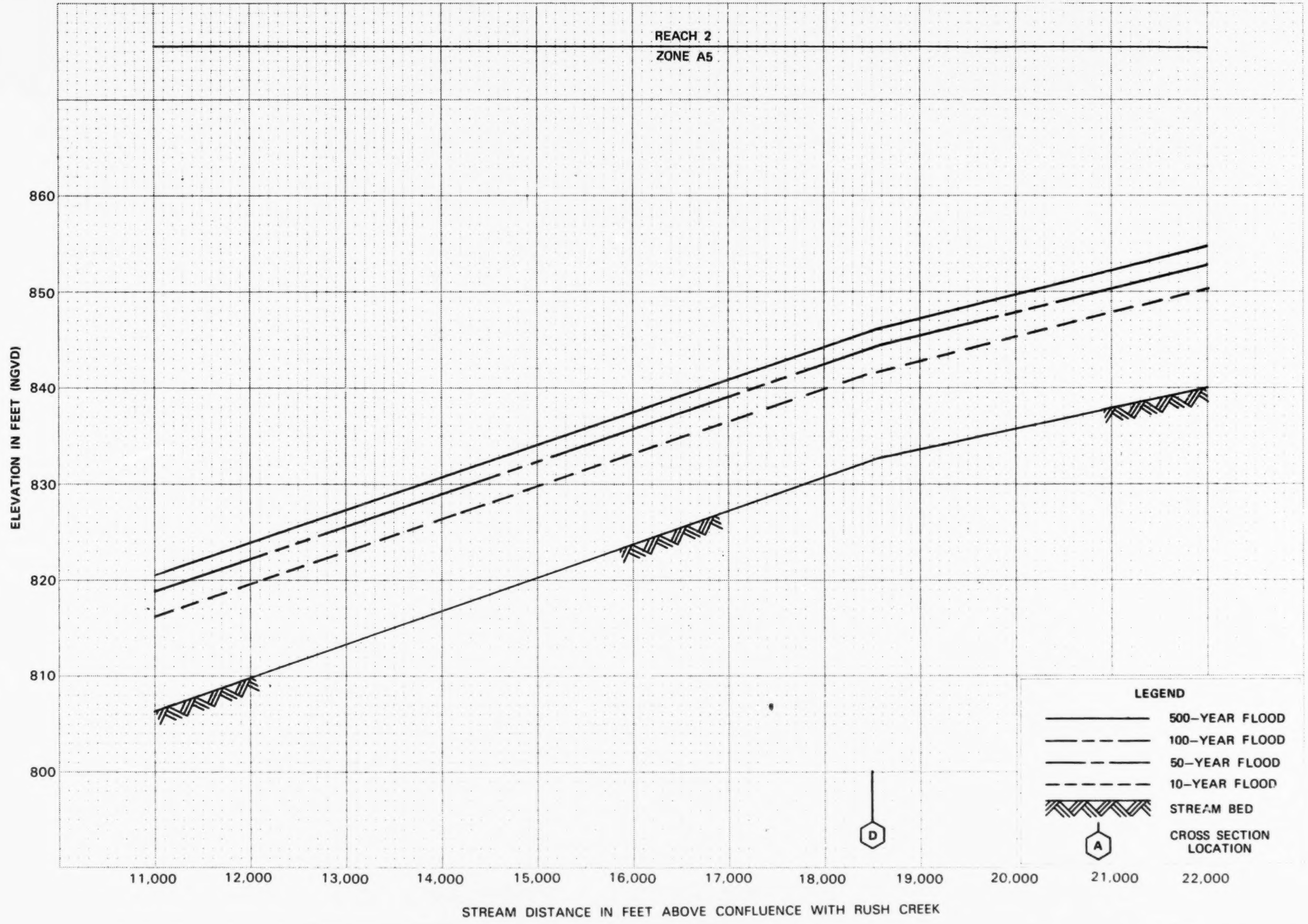


FLOOD PROFILES

LITTLE RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



FLOOD PROFILES

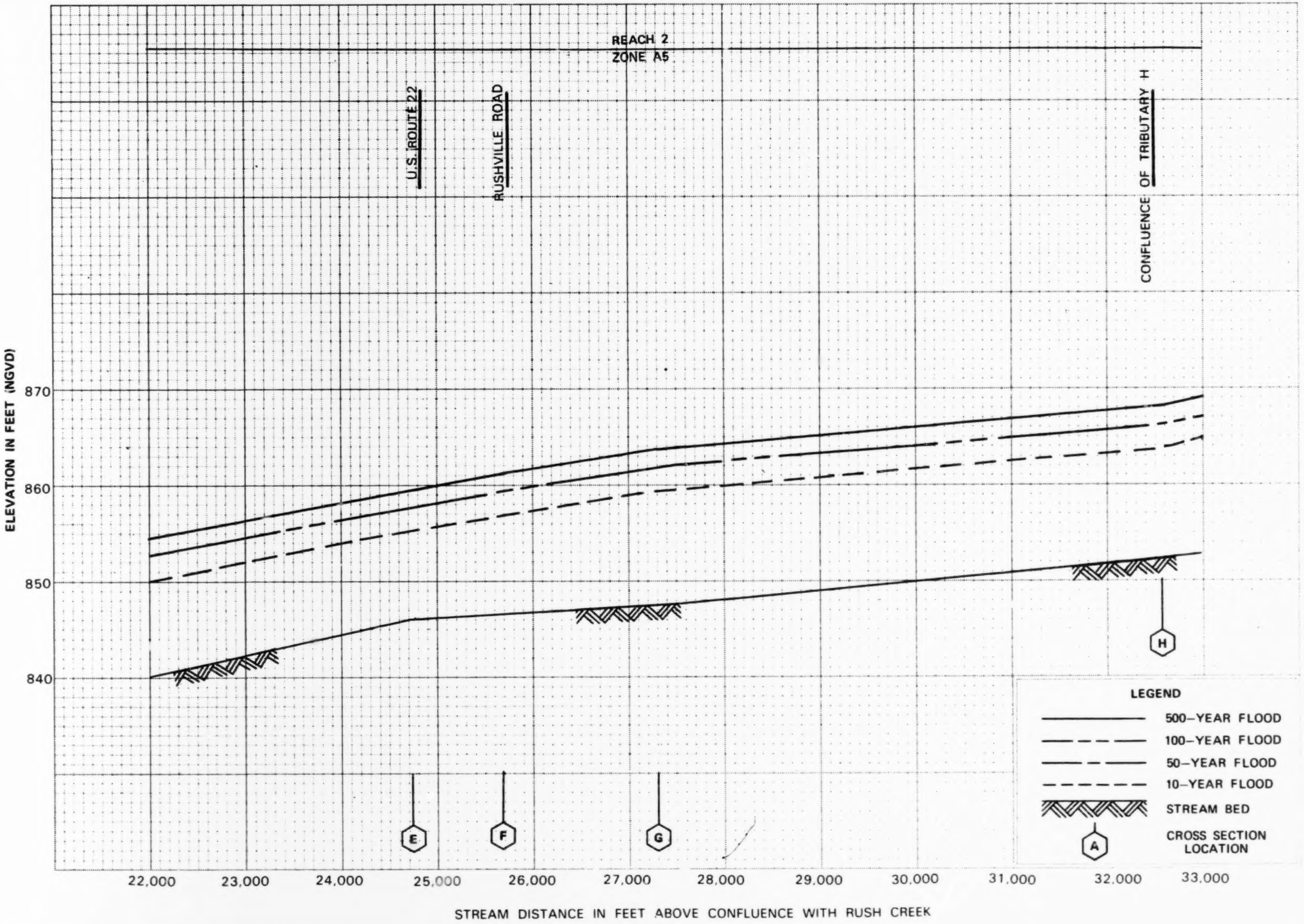
LITTLE RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

35P

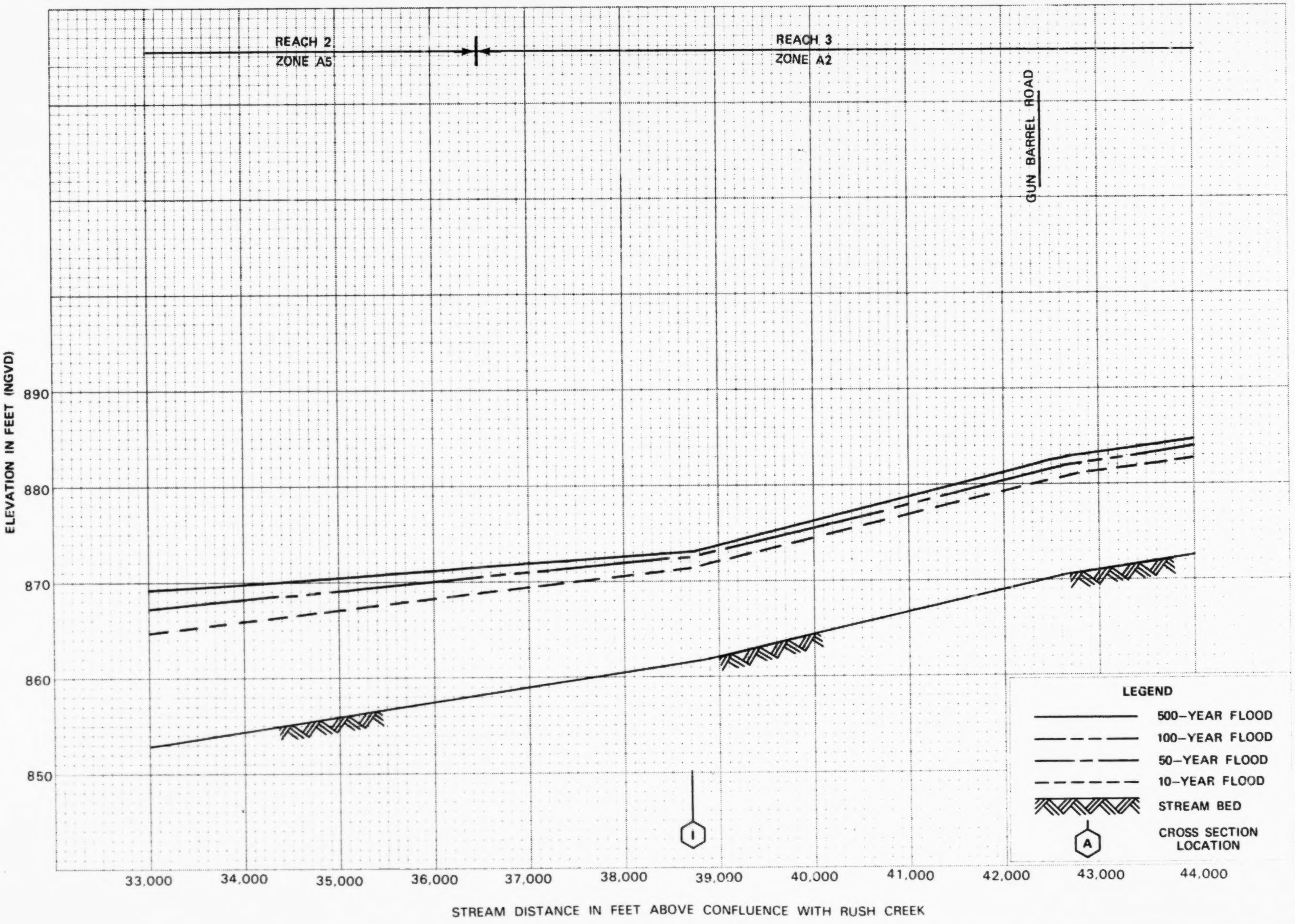


FLOOD PROFILES

LITTLE RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



FLOOD PROFILES

LITTLE RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

37P

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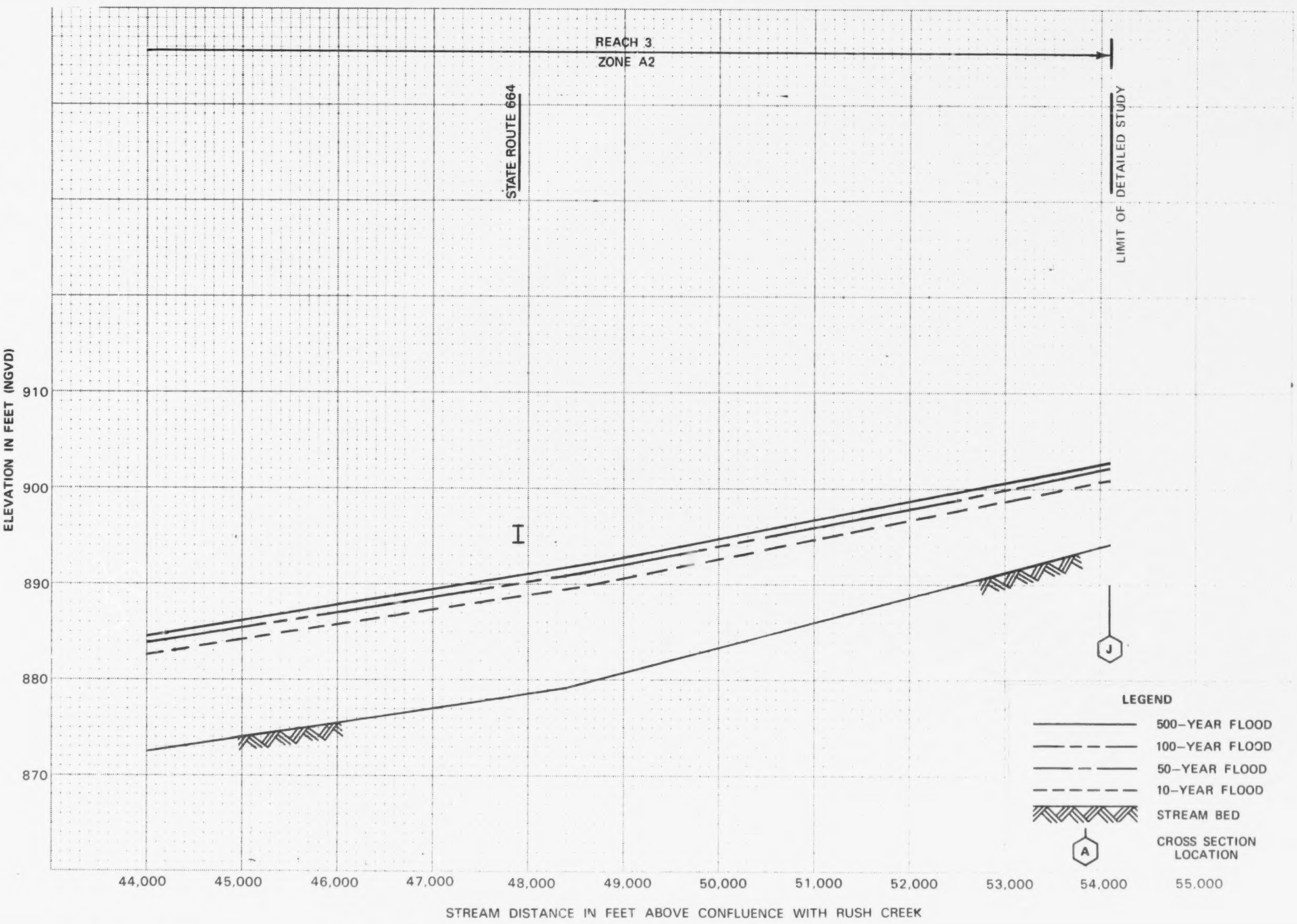
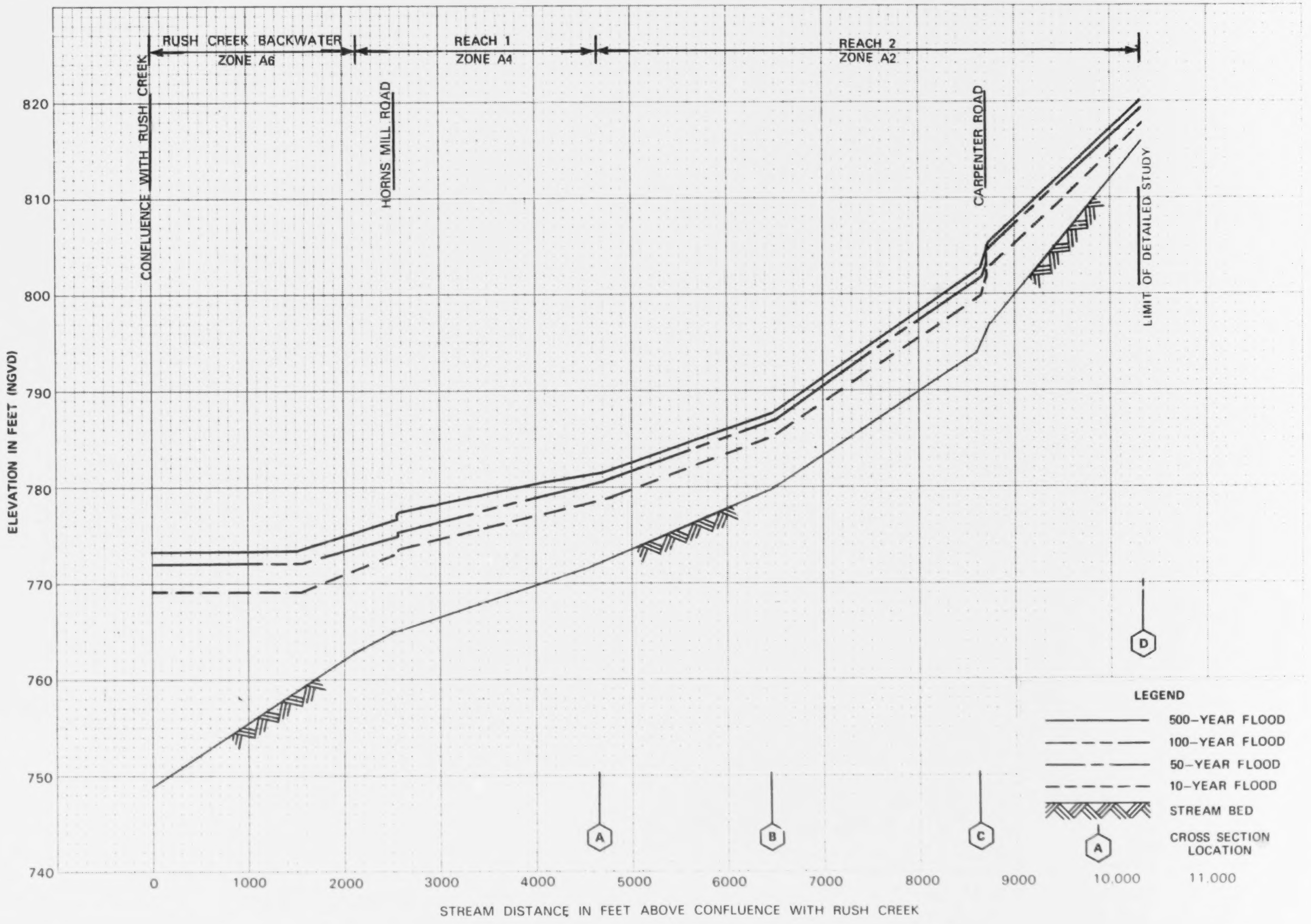


FLOOD PROFILES

LITTLE RUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



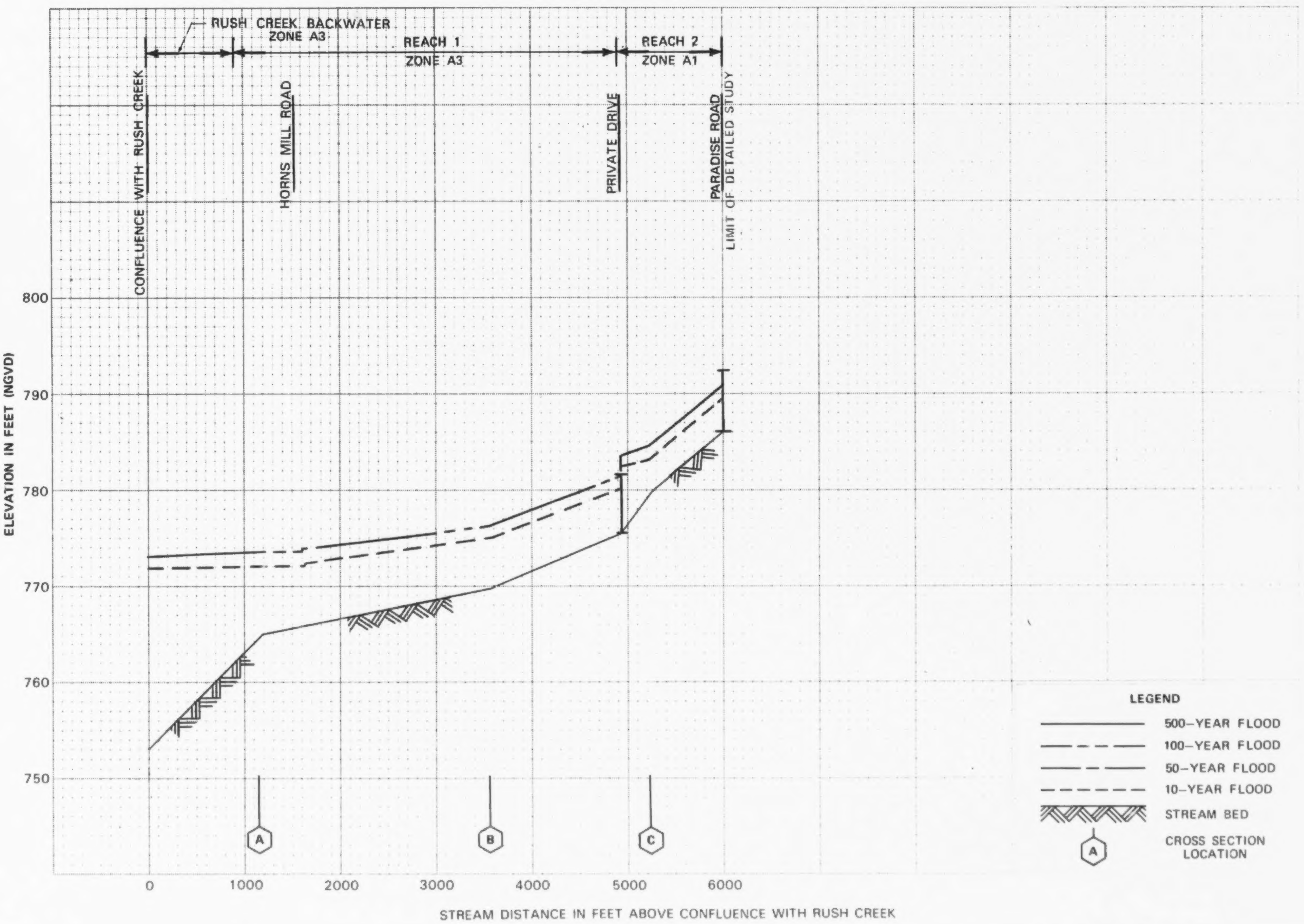
FLOOD PROFILES

TRIBUTARY A

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

39P

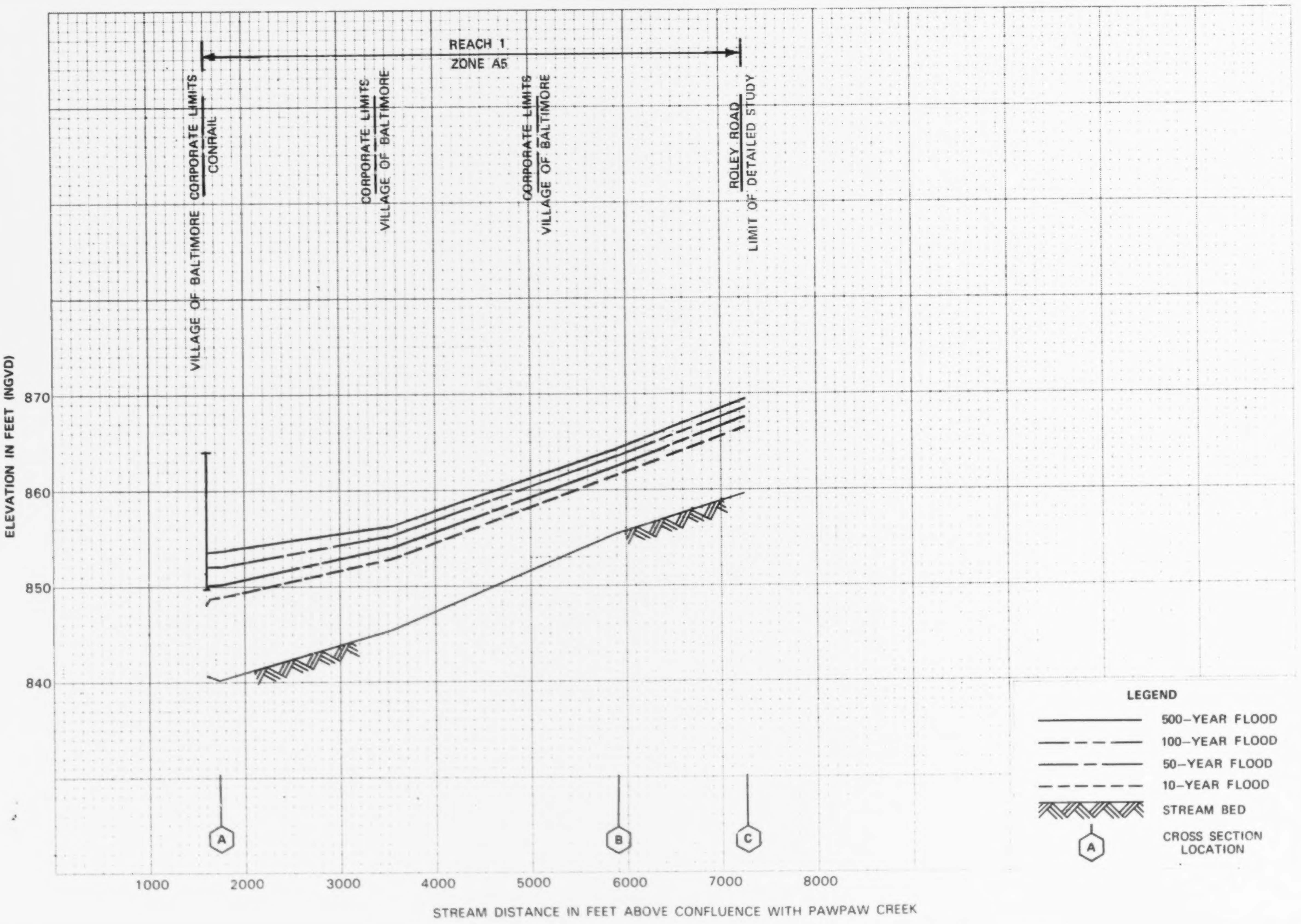


FLOOD PROFILES

TRIBUTARY B

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

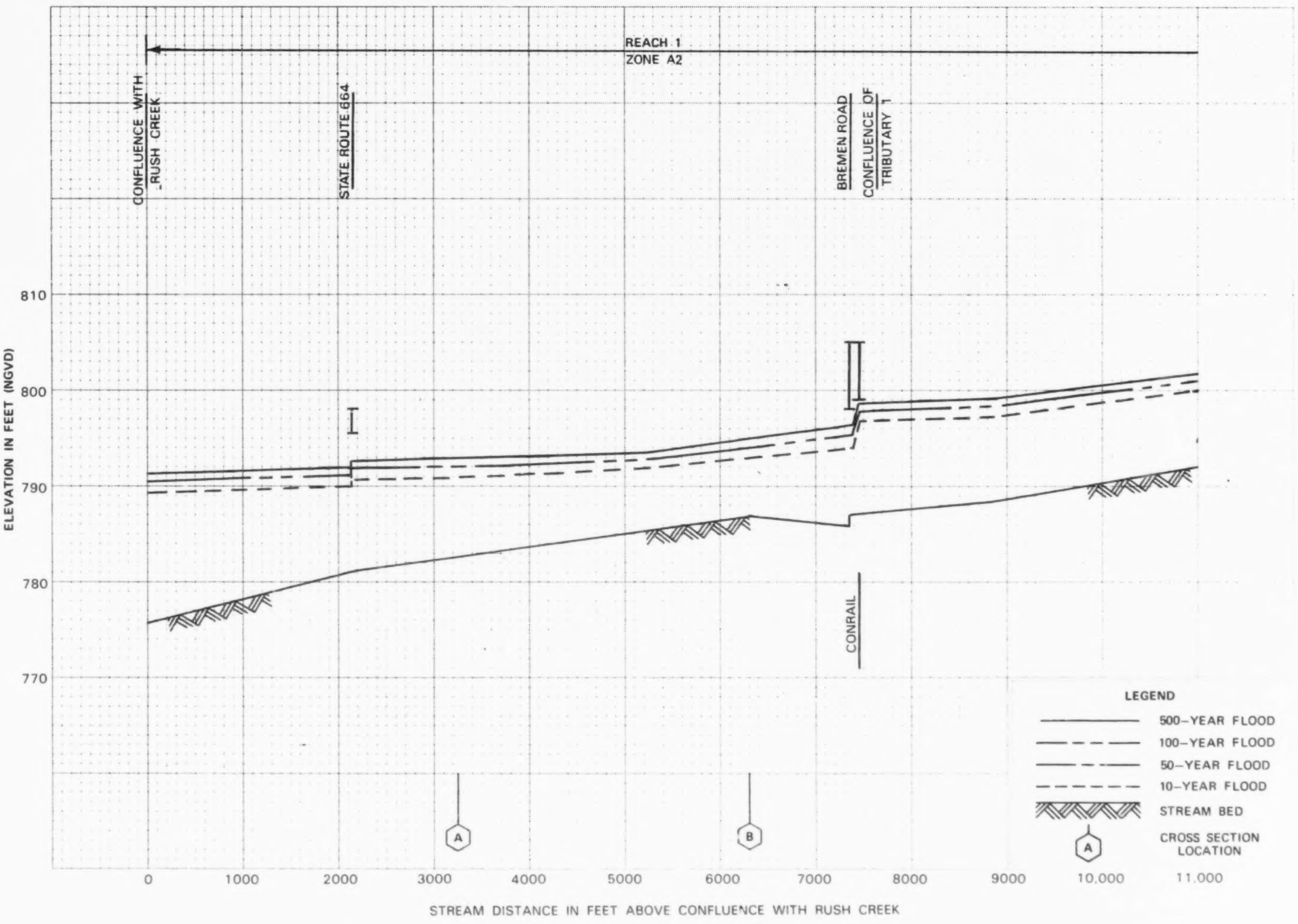


FLOOD PROFILES

BALTIMORE TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



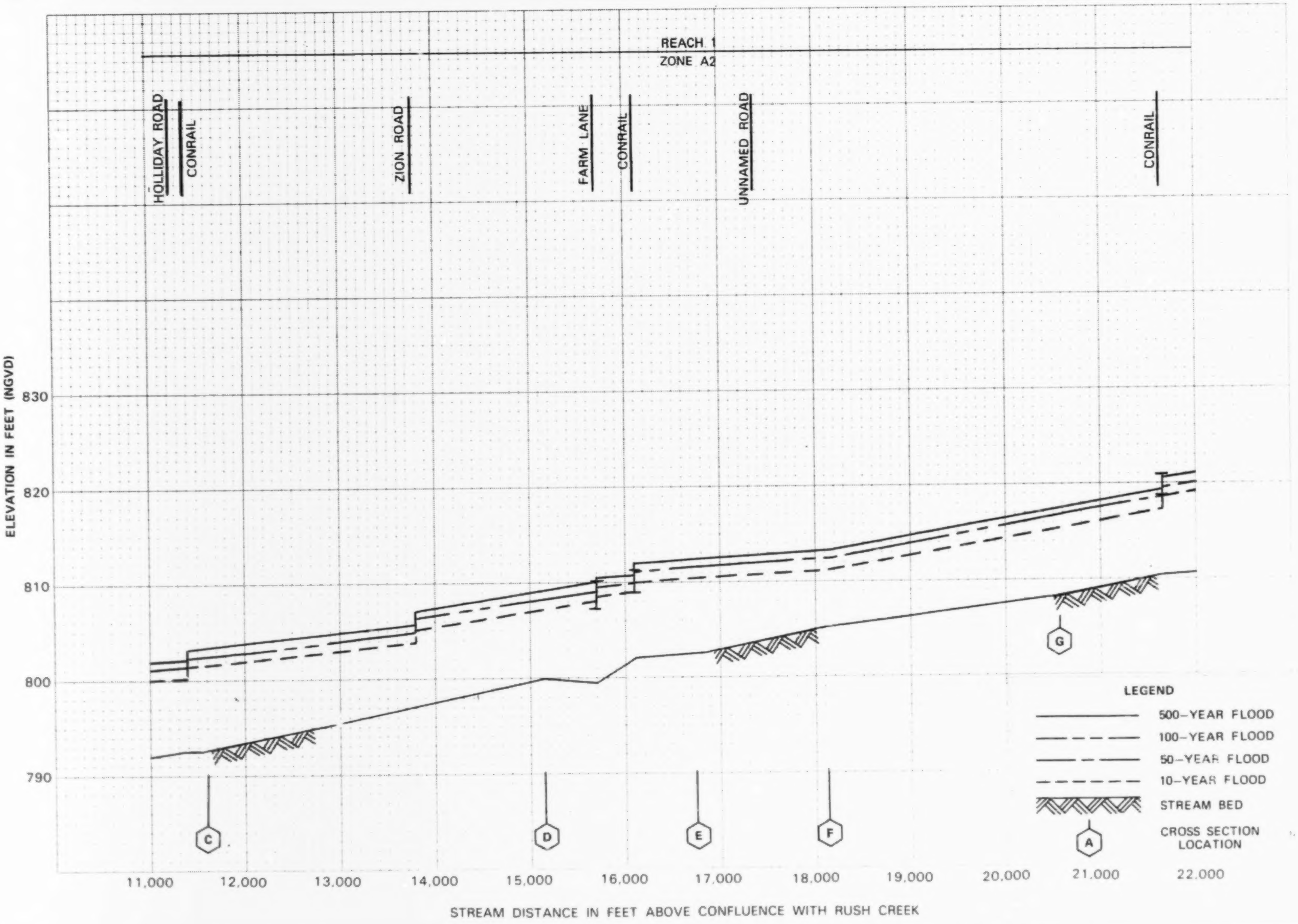
FLOOD PROFILES

RACCOON RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

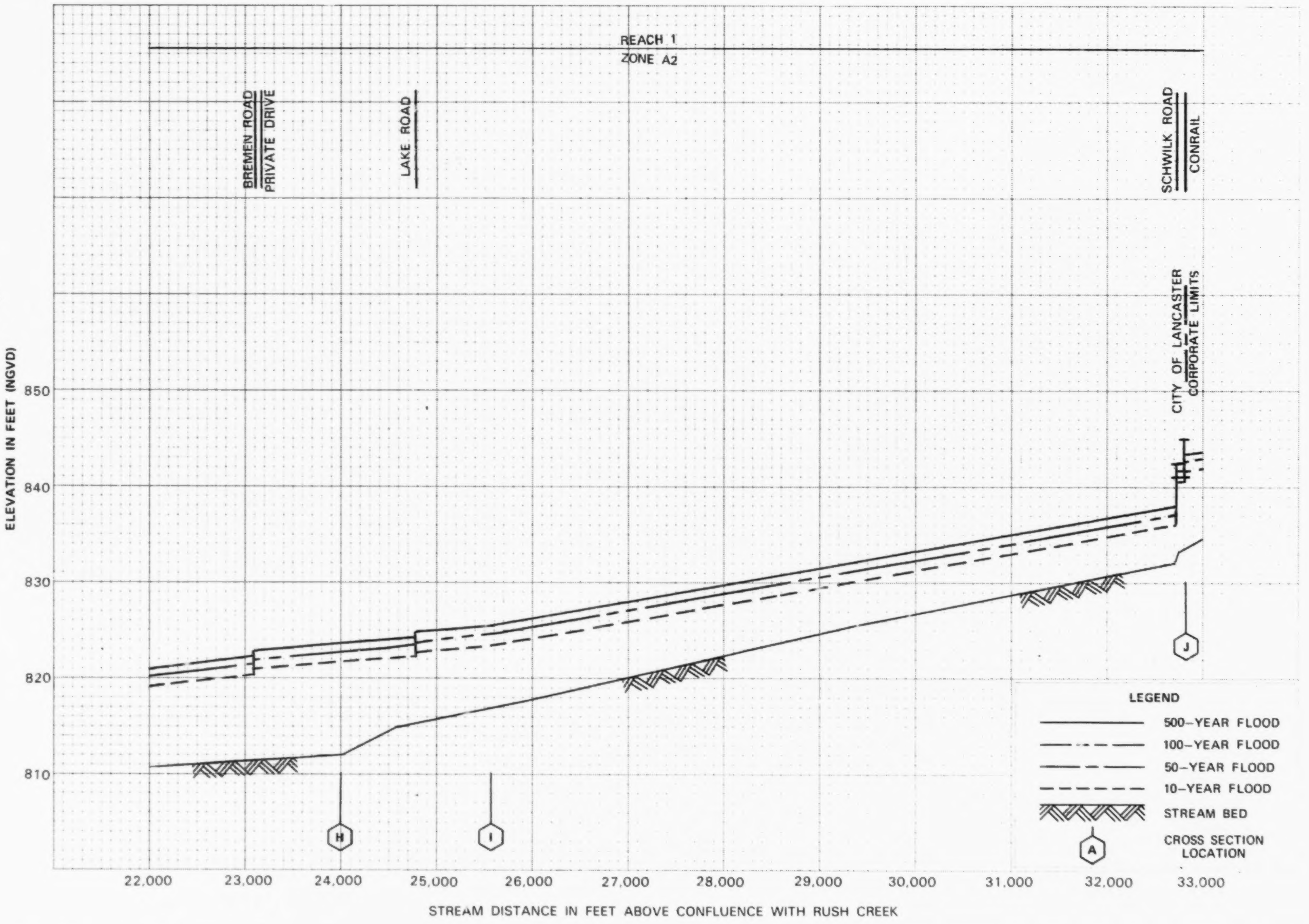


FLOOD PROFILES

RACCOON RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



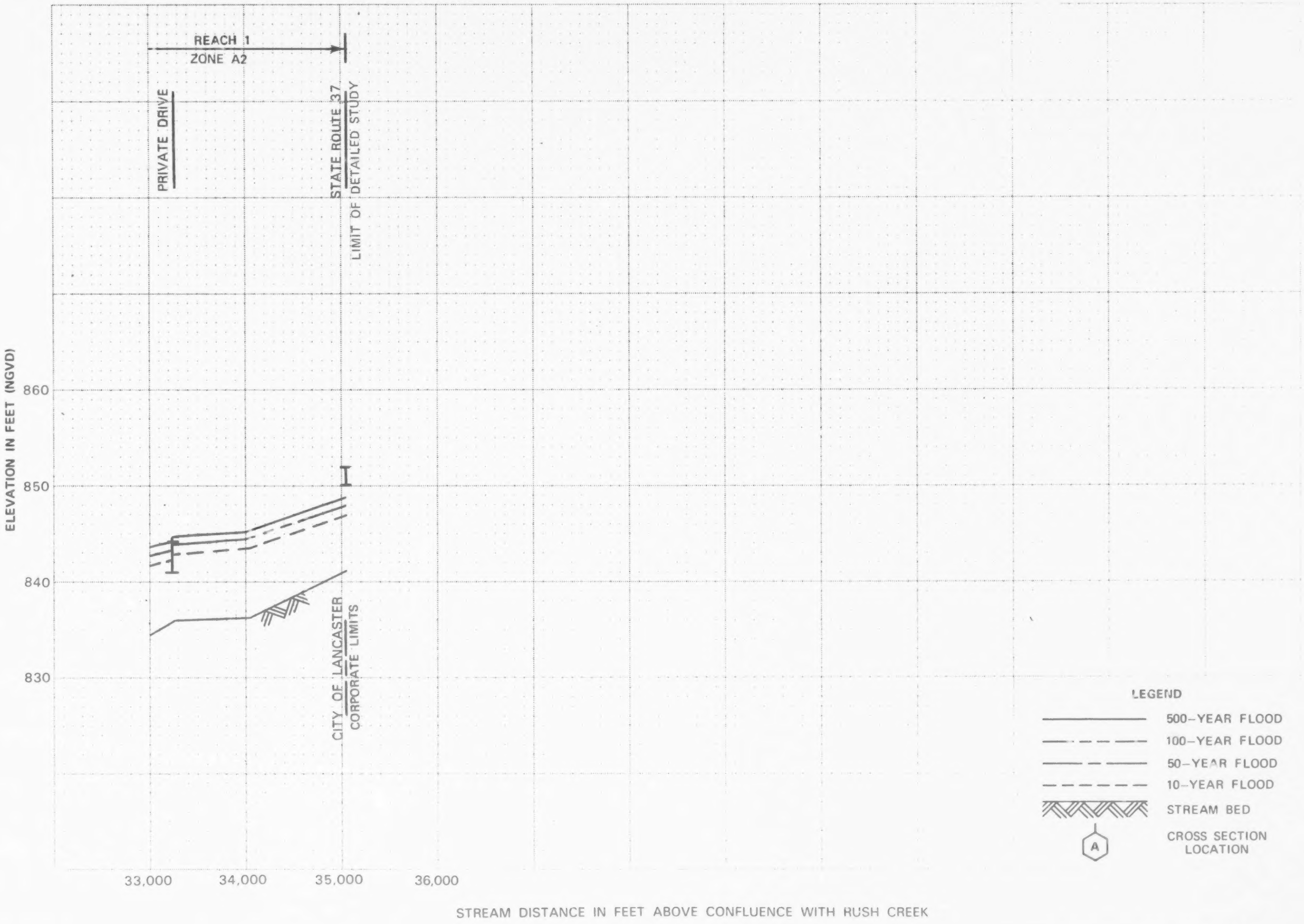
FLOOD PROFILES

RACCOON RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

44P

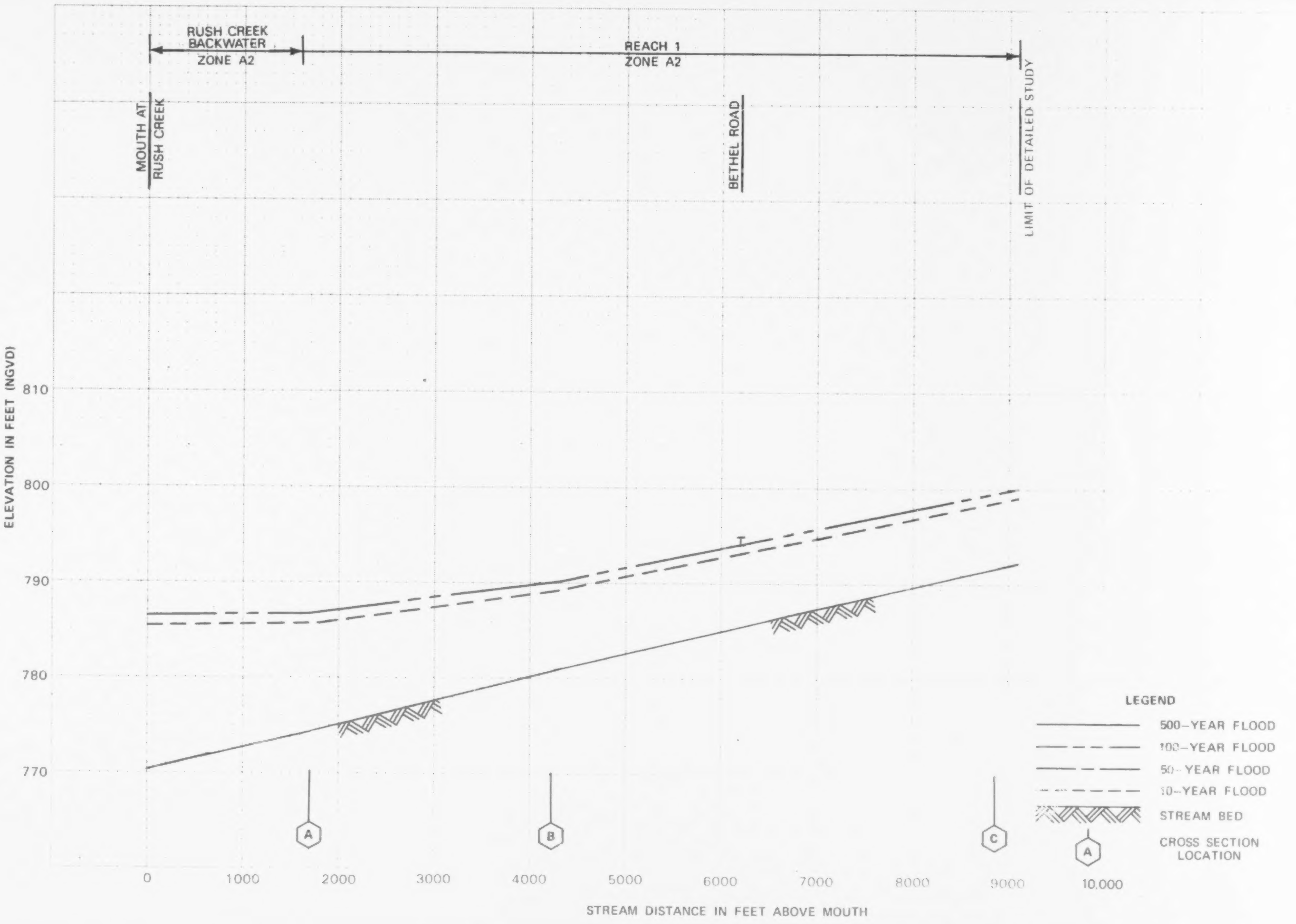


FLOOD PROFILES

RACCOON RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

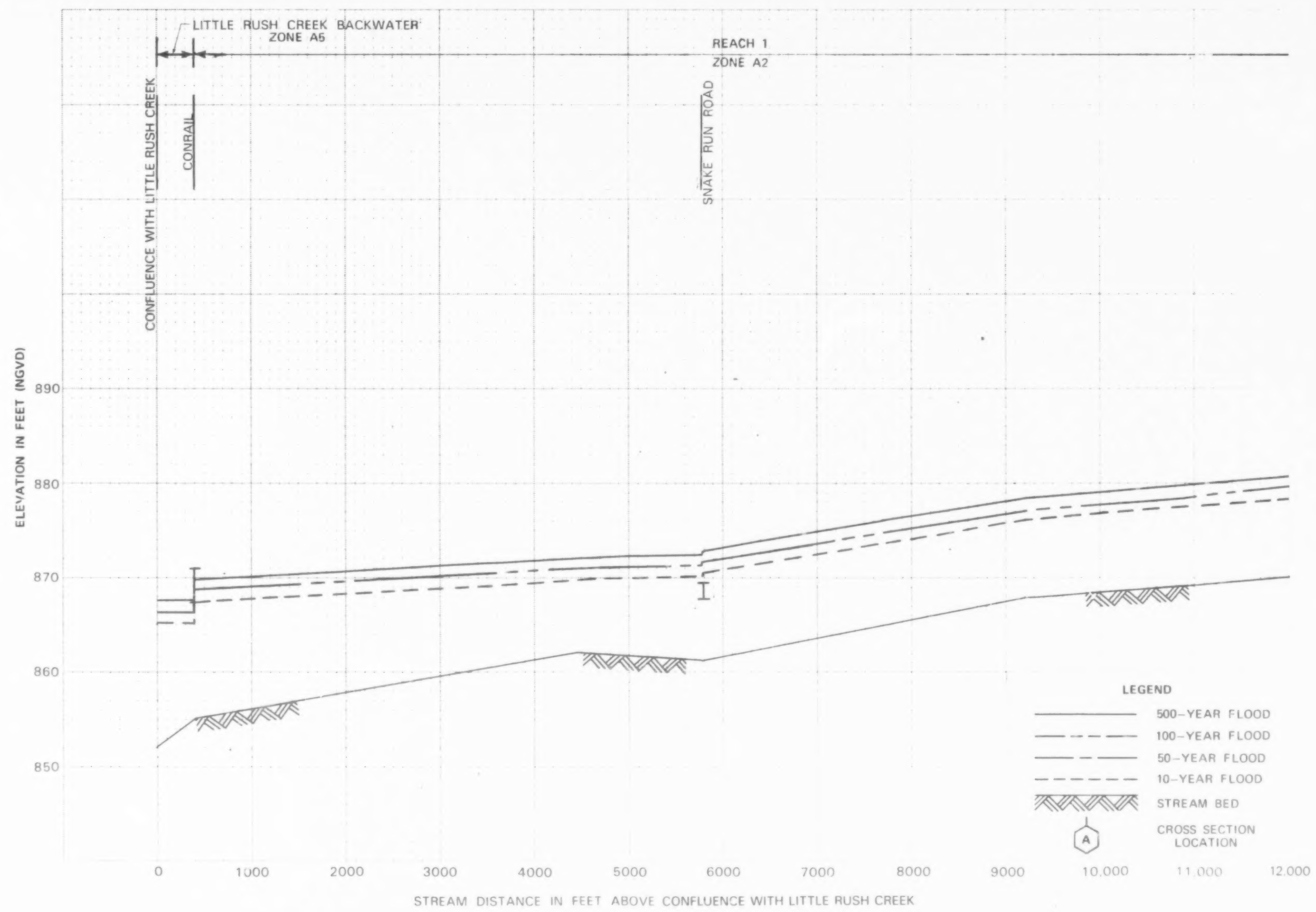


FLOOD PROFILES

TURKEY RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

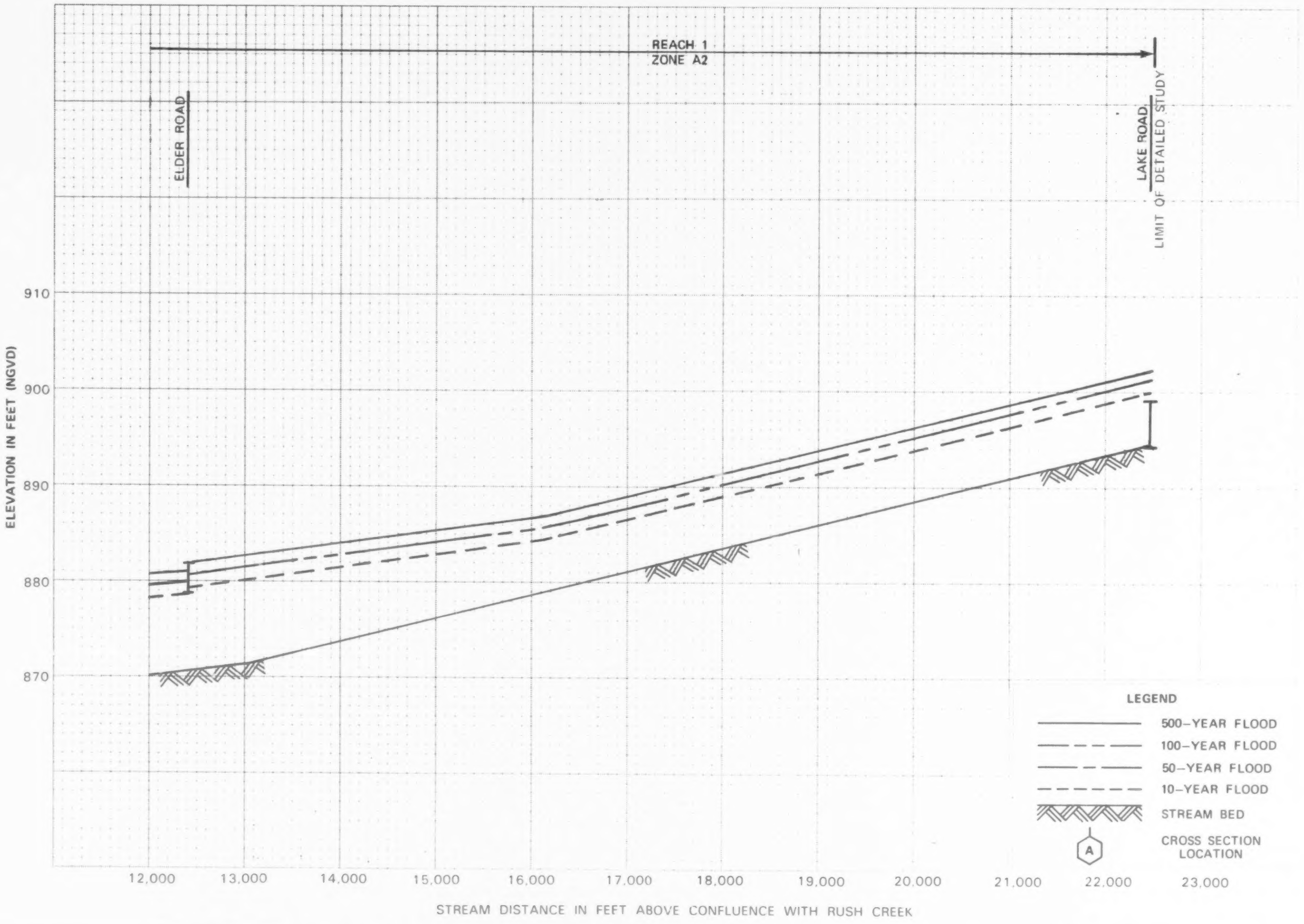


FLOOD PROFILES

TRIBUTARY H

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

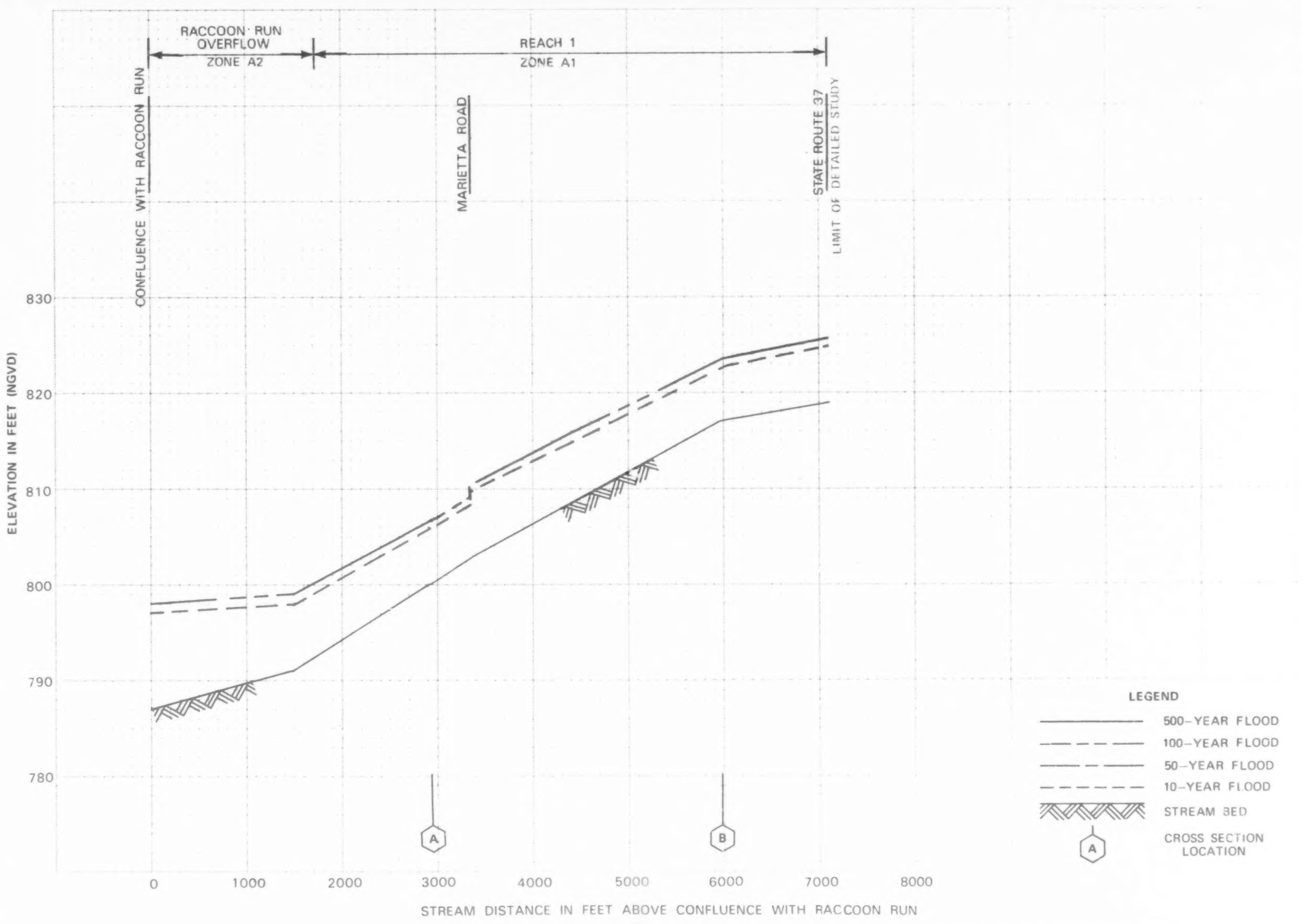


FLOOD PROFILES

TRIBUTARY H

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

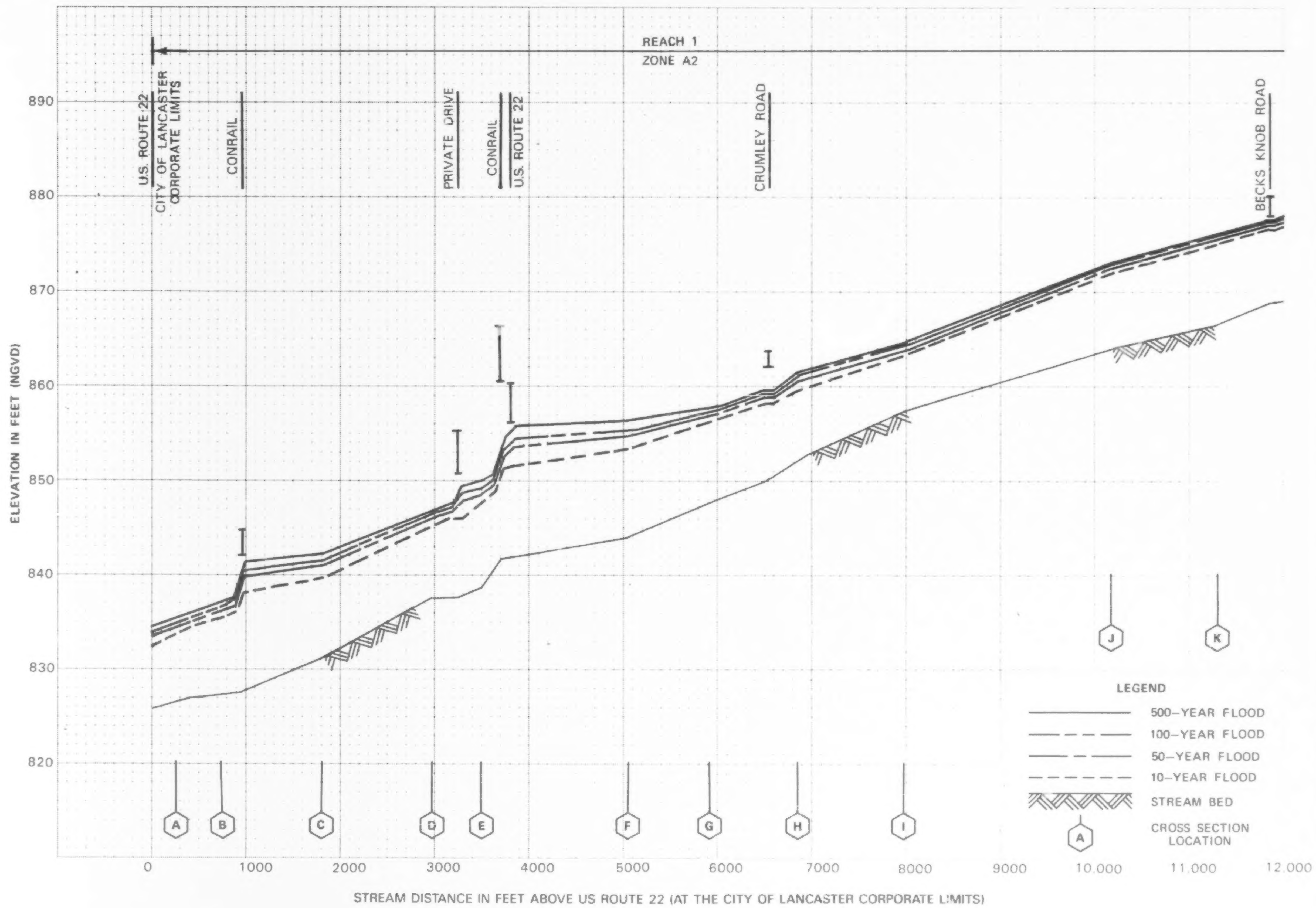


FLOOD PROFILES

TRIBUTARY I

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



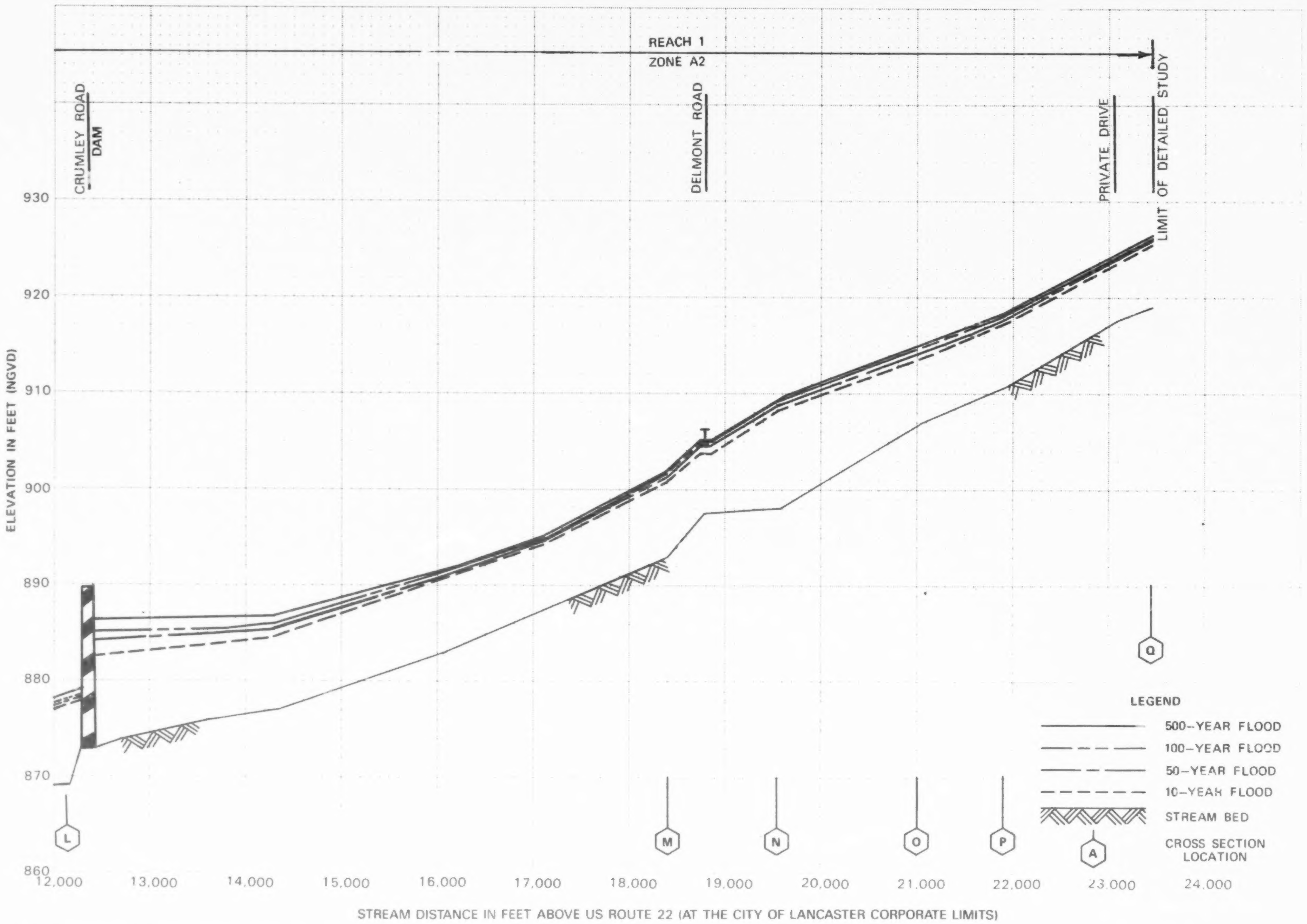
FLOOD PROFILES

HUNTERS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

93



FLOOD PROFILES

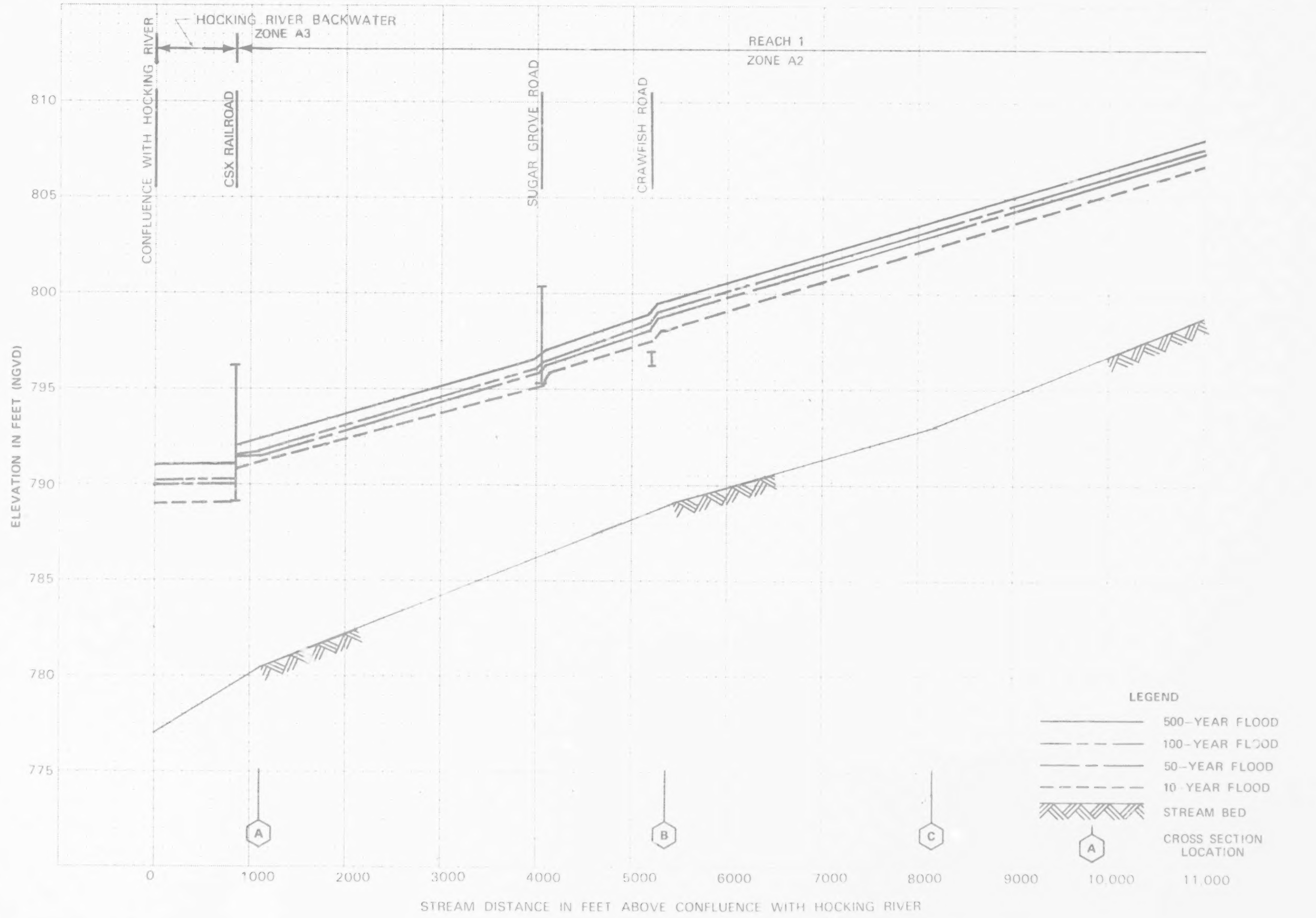
HUNTERS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

51P



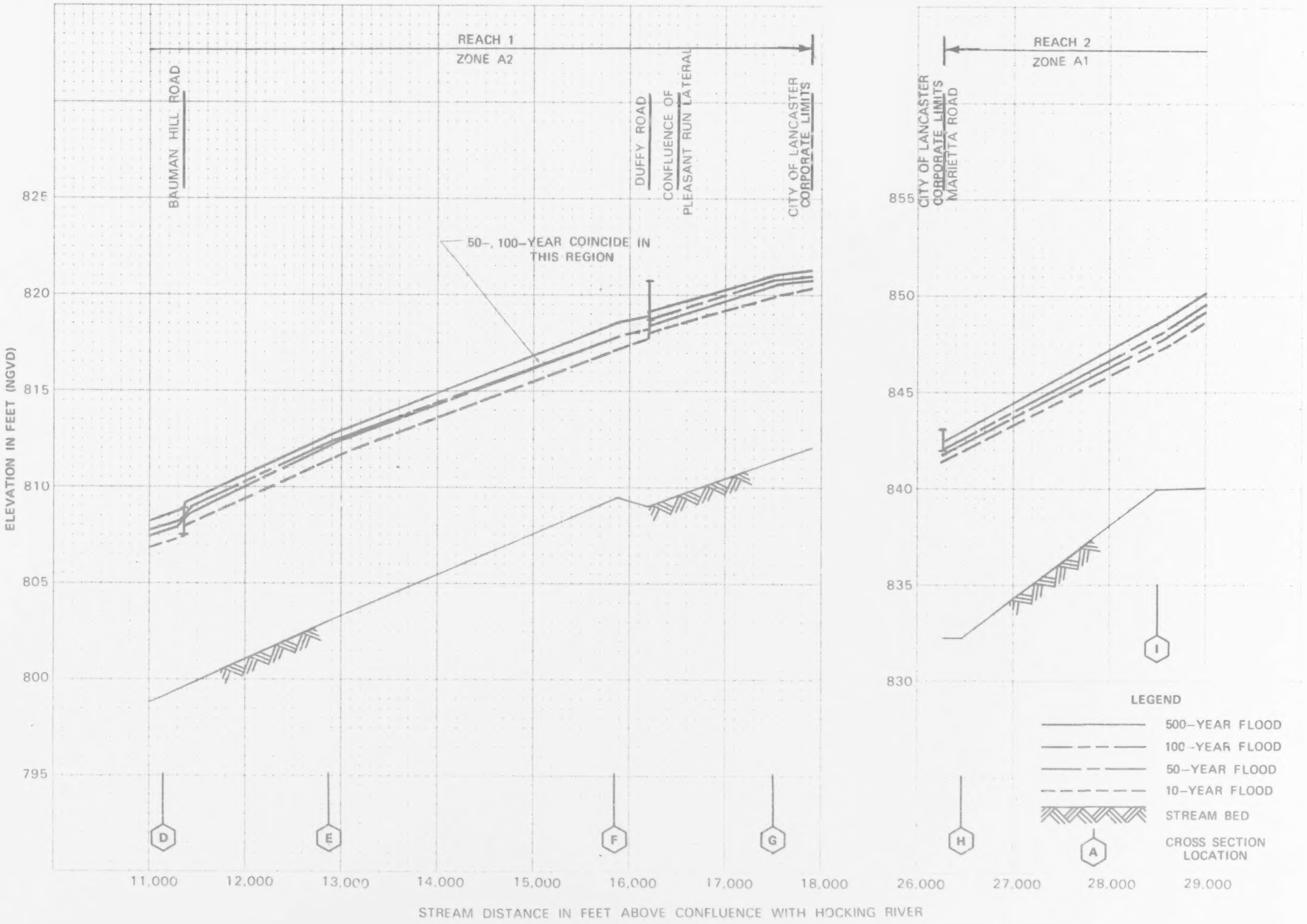
FLOOD PROFILES

PLEASANT RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

52P



FLOOD PROFILES

PLEASANT RUN

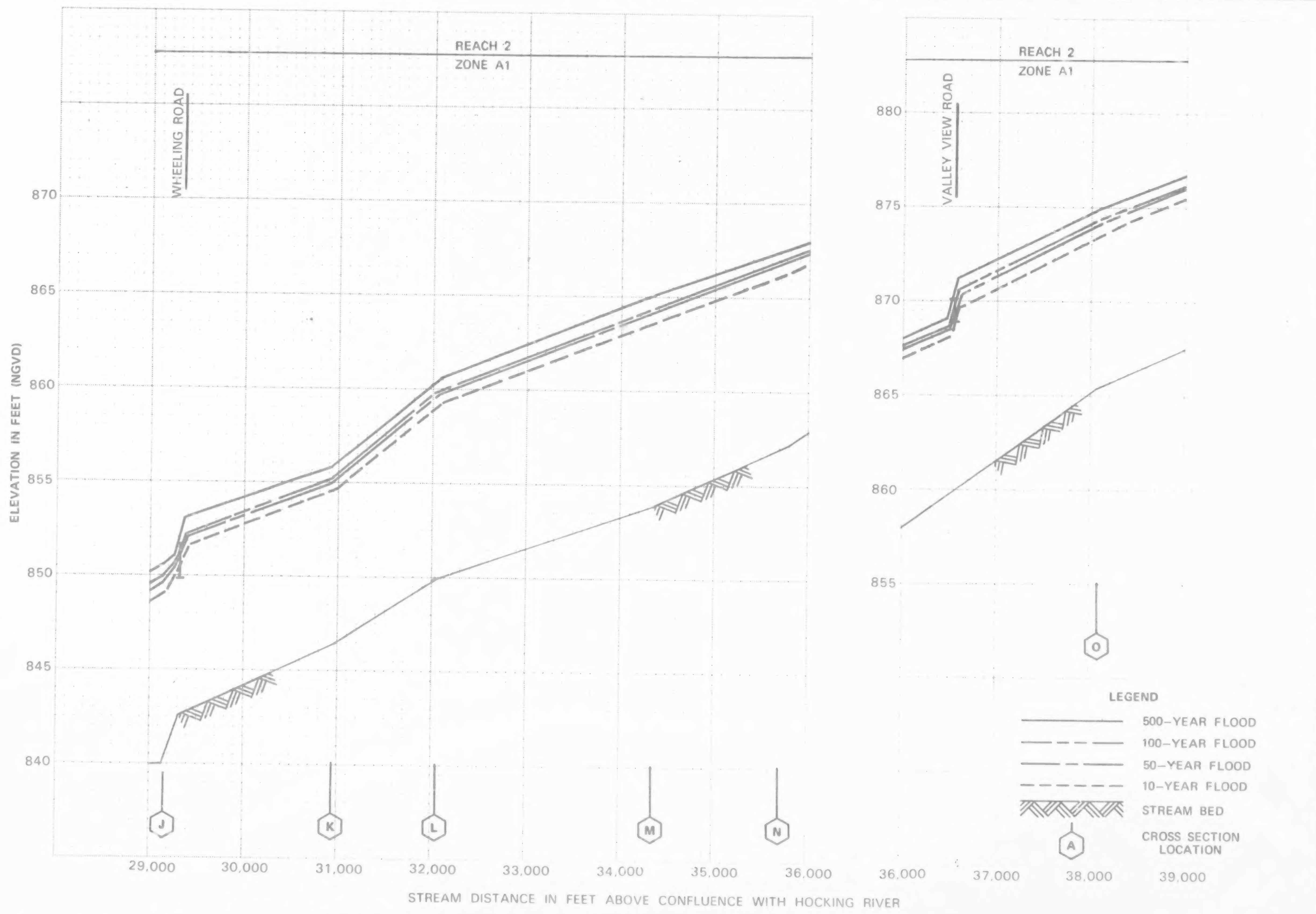
FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

53P

94



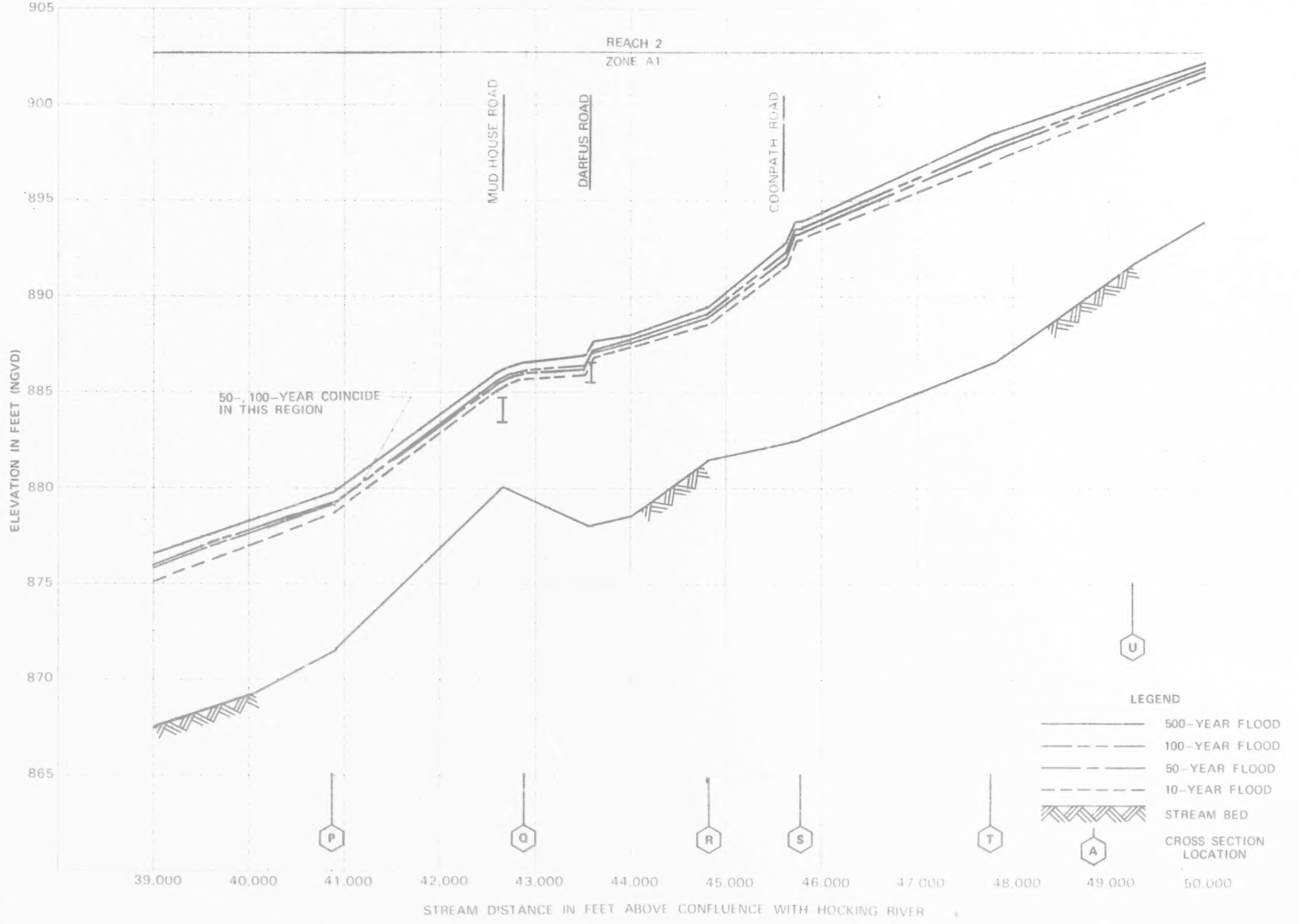
FLOOD PROFILES

PLEASANT RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

54P



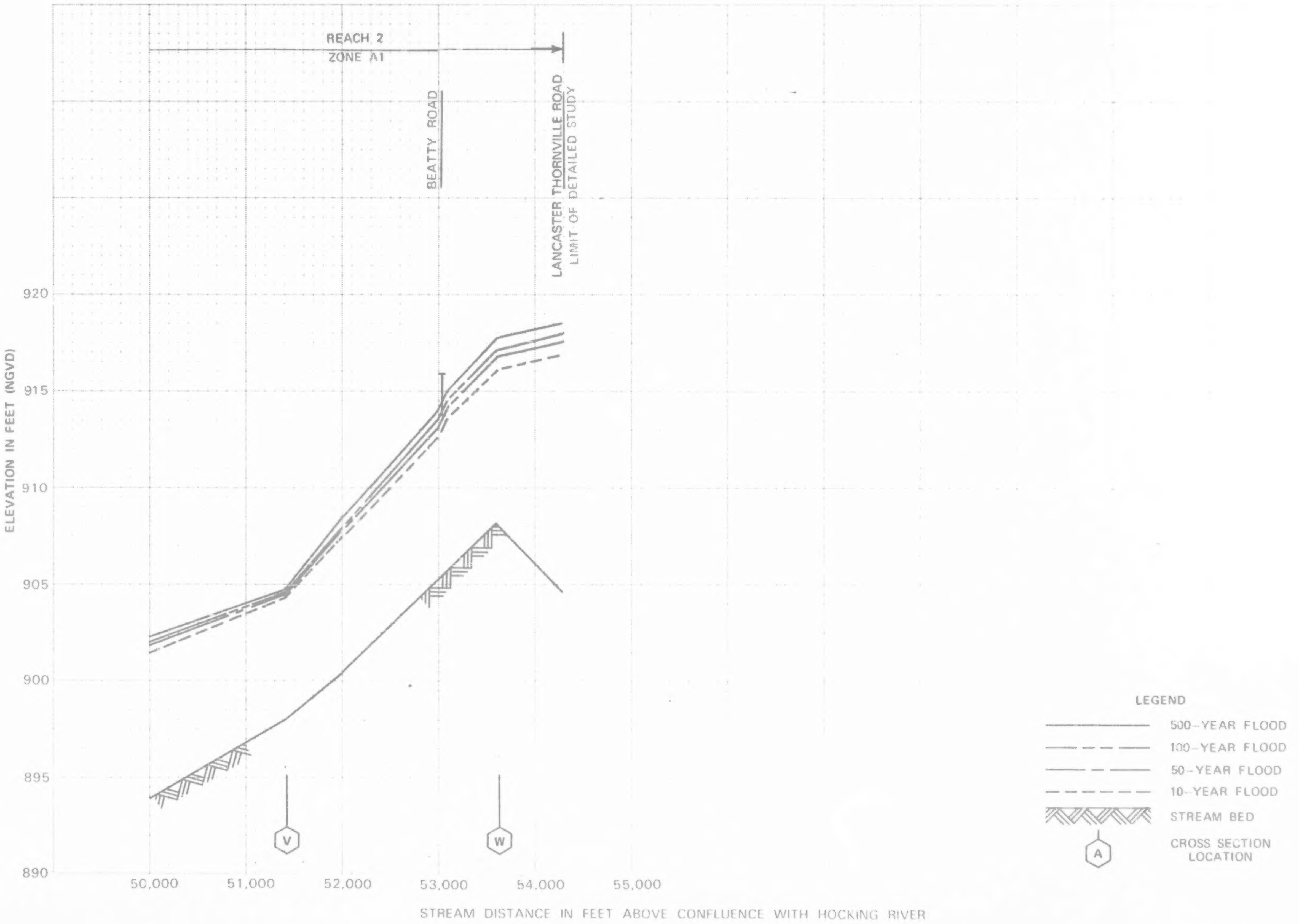
FLOOD PROFILES

PLEASANT RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)



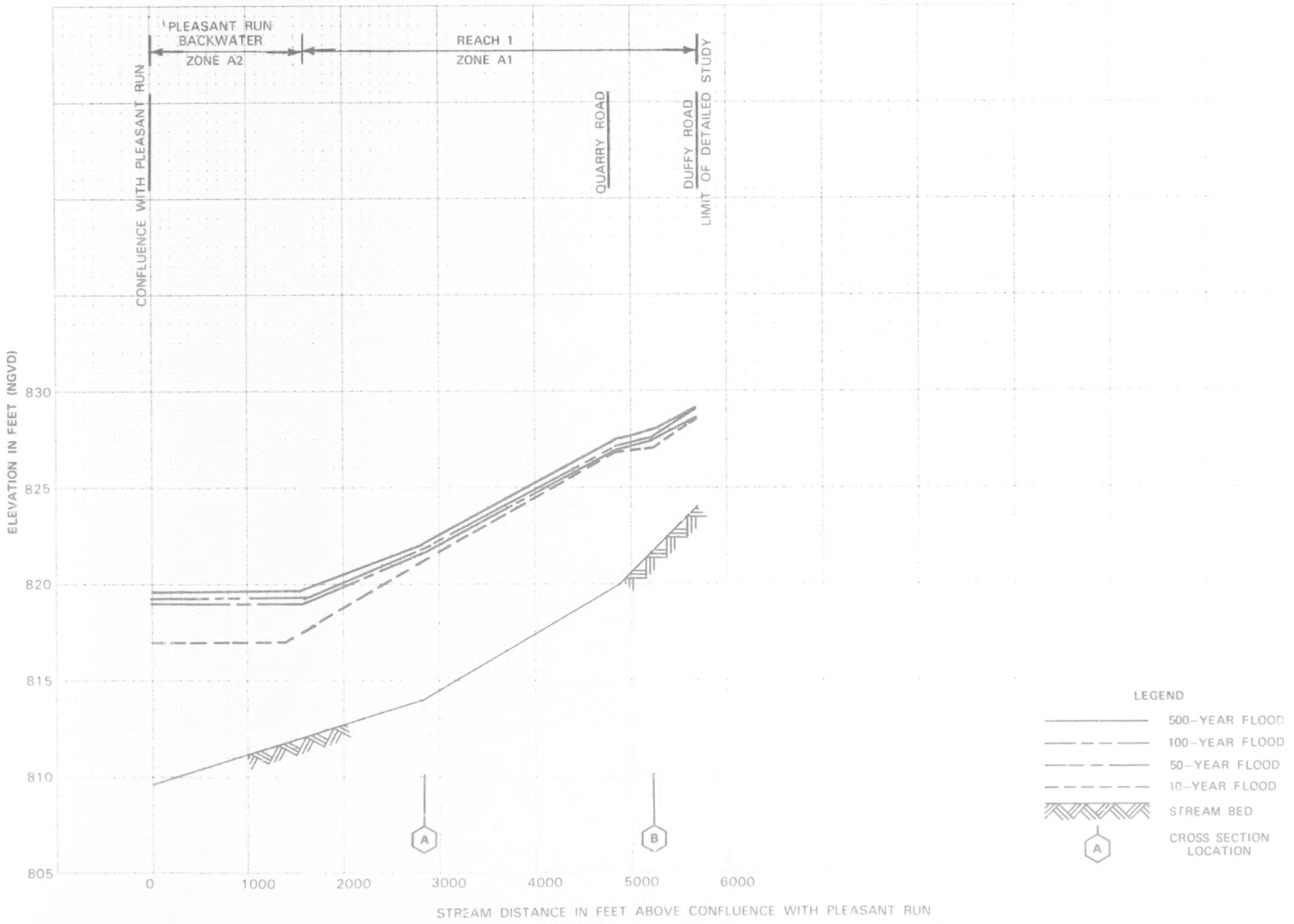
FLOOD PROFILES

PLEASANT RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

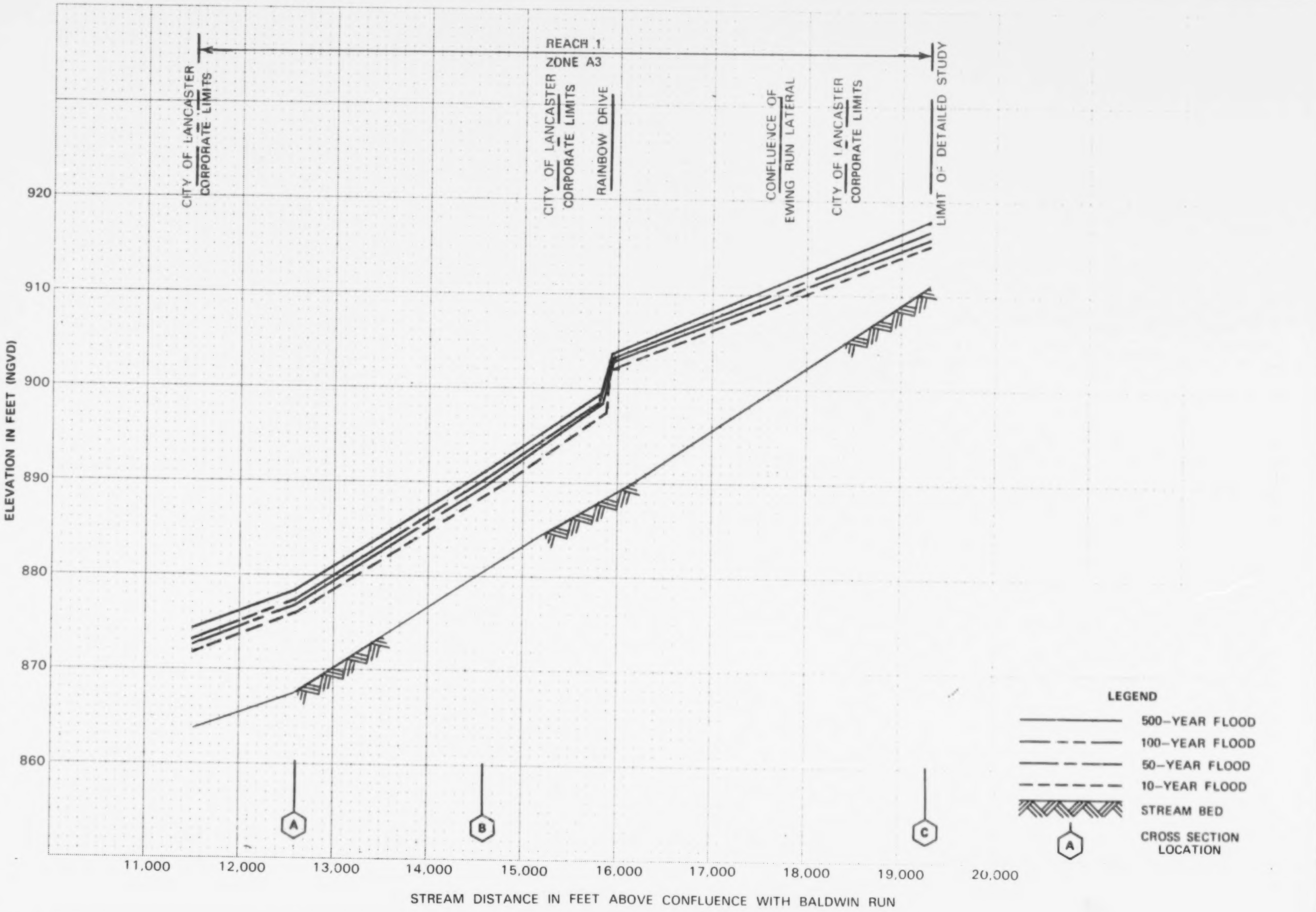


FLOOD PROFILES

PLEASANT RUN LATERAL

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



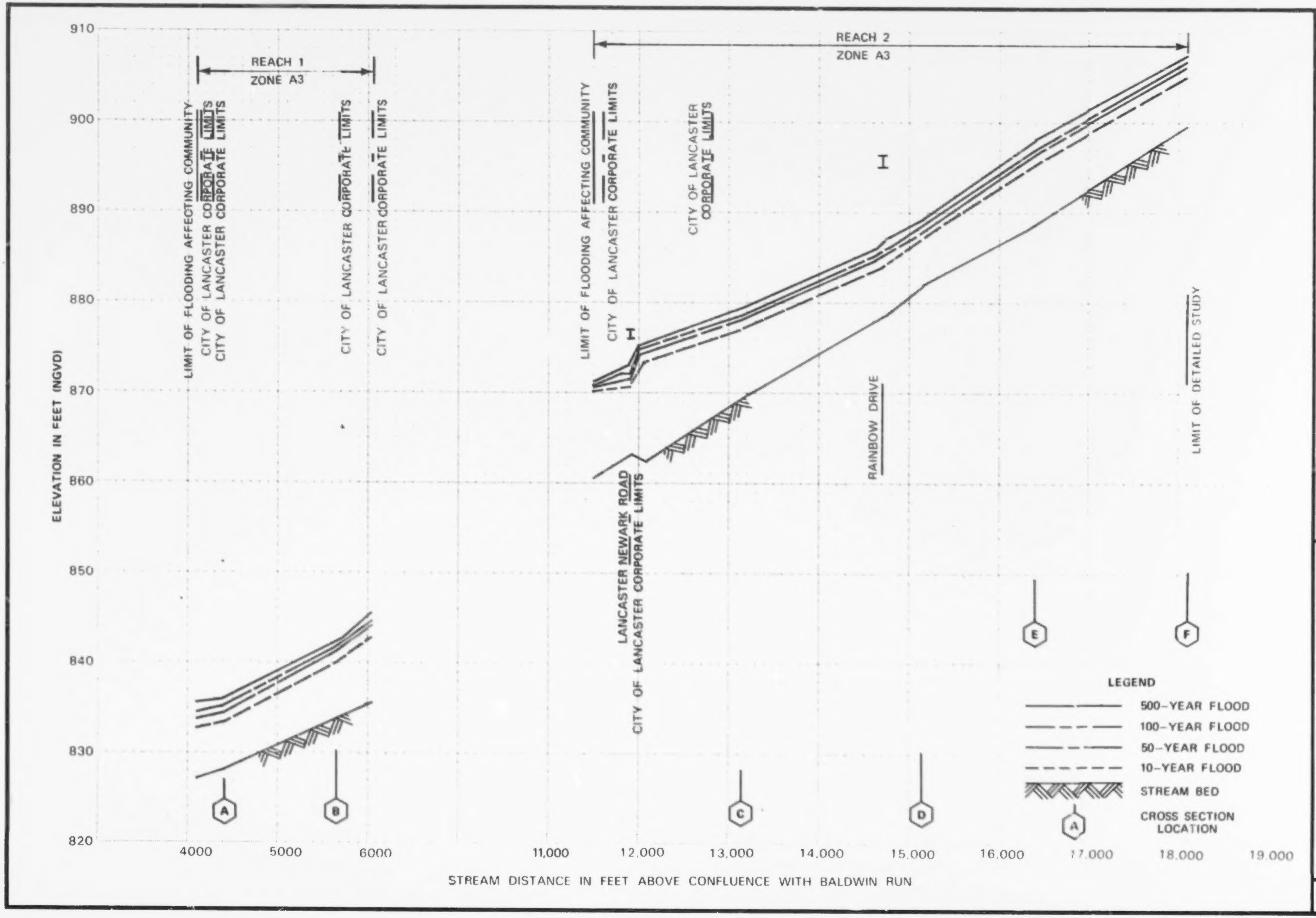
FLOOD PROFILES

EWING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

58P

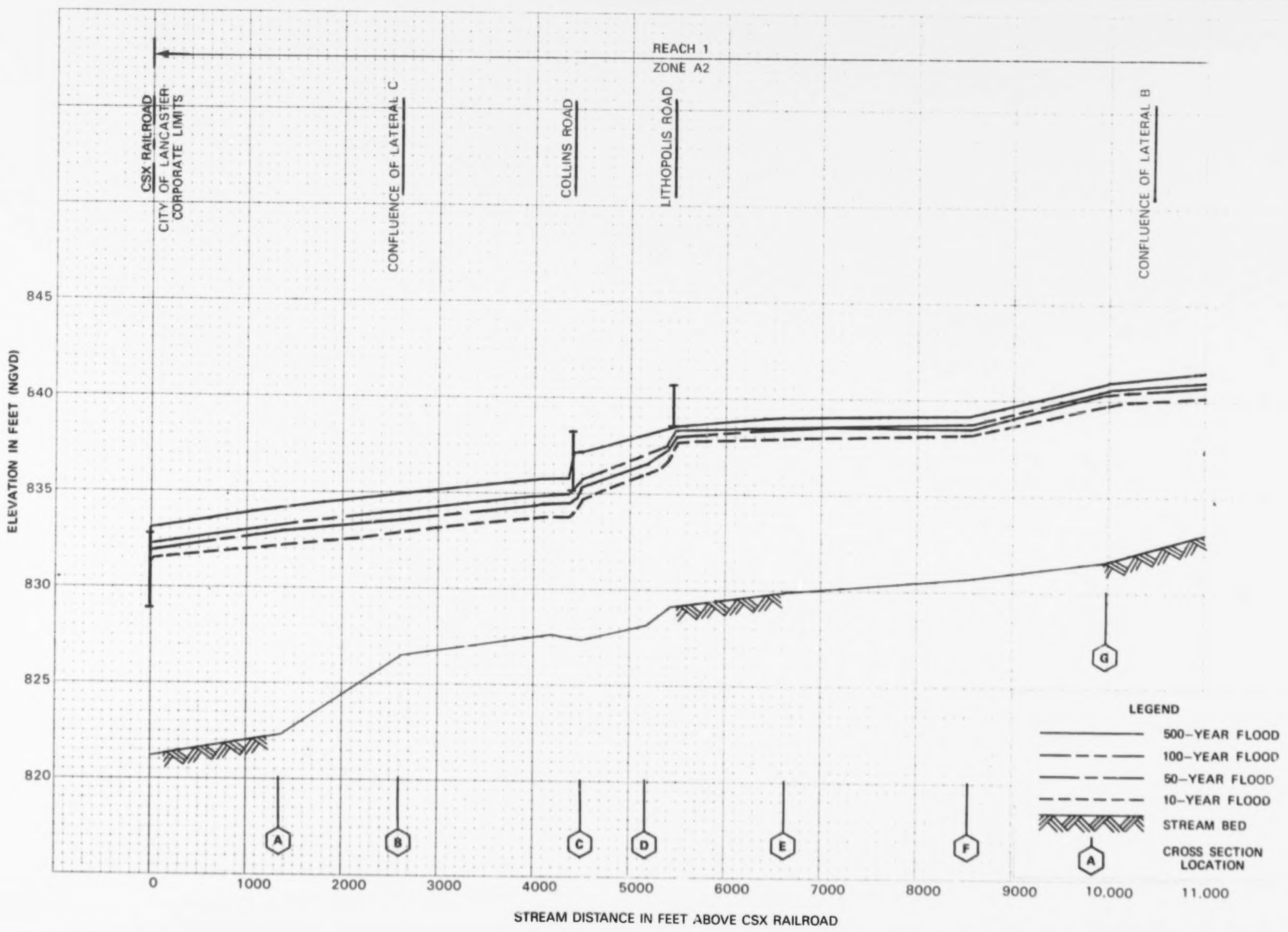


FLOOD PROFILES

FETTERS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)



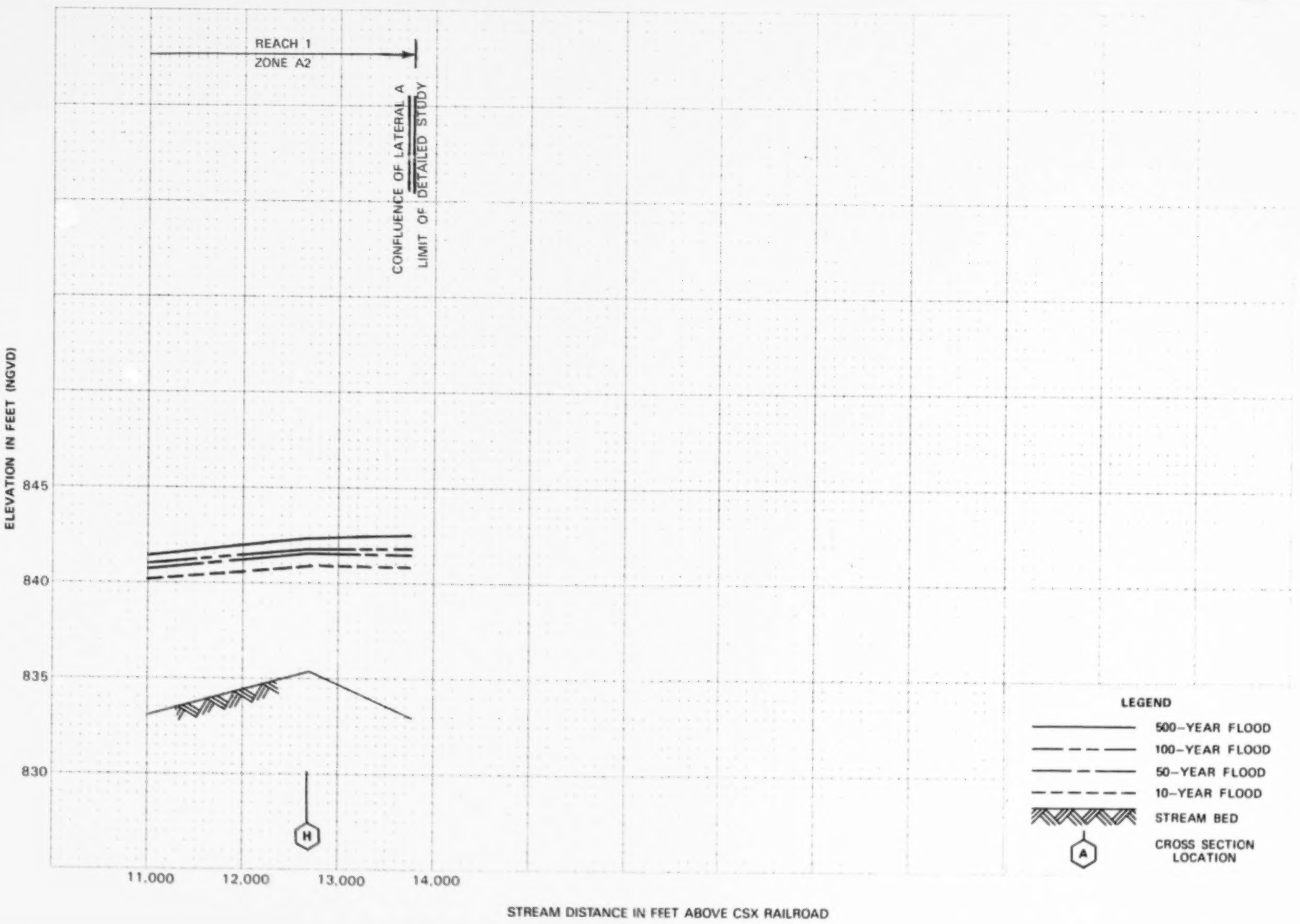
FLOOD PROFILES

OHIO CANAL

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

103



FLOOD PROFILES

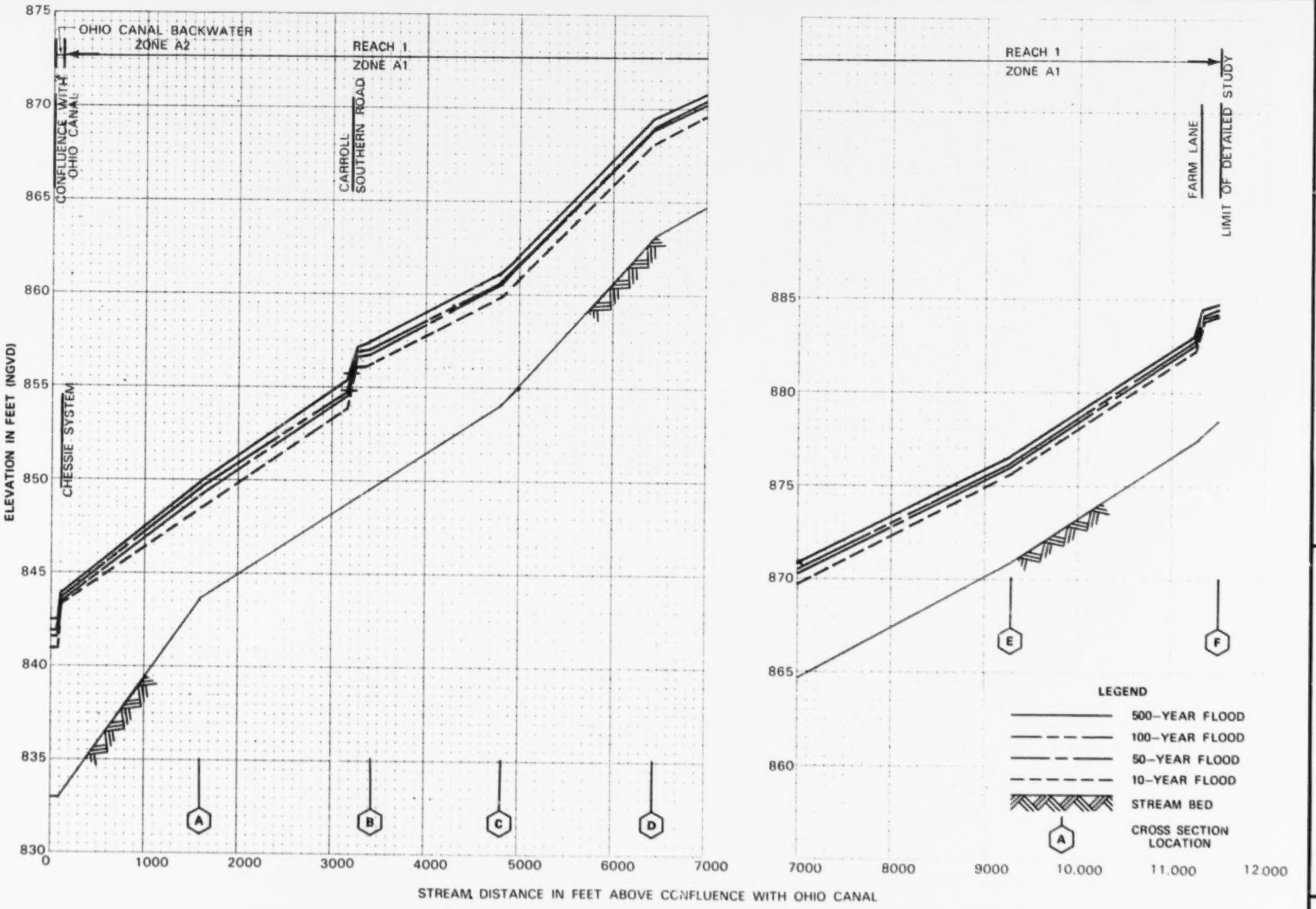
OHIO CANAL

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

61P

114



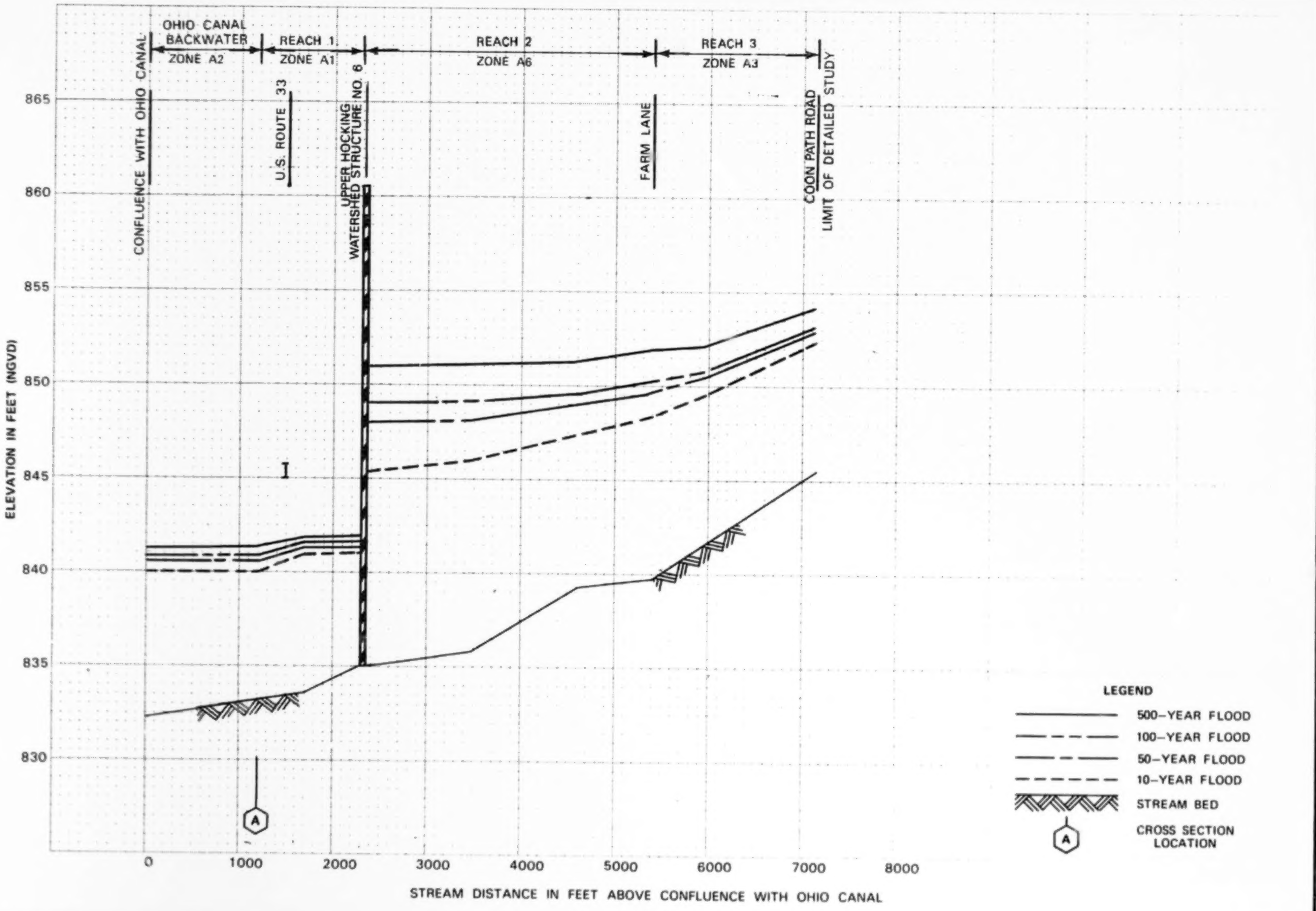
FLOOD PROFILES

LATERAL A

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

62P



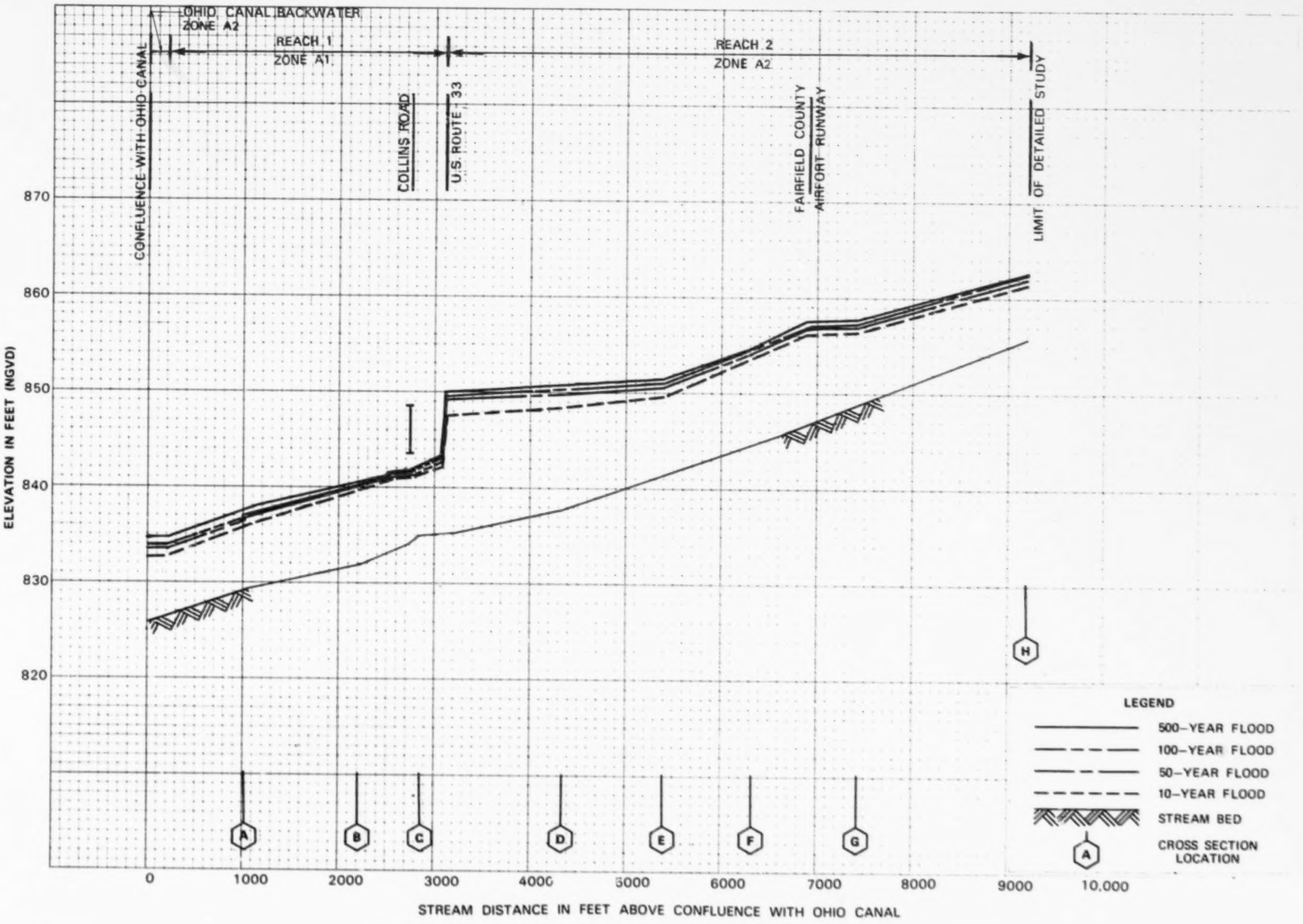
FLOOD PROFILES

LATERAL B

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

63P



FLOOD PROFILES

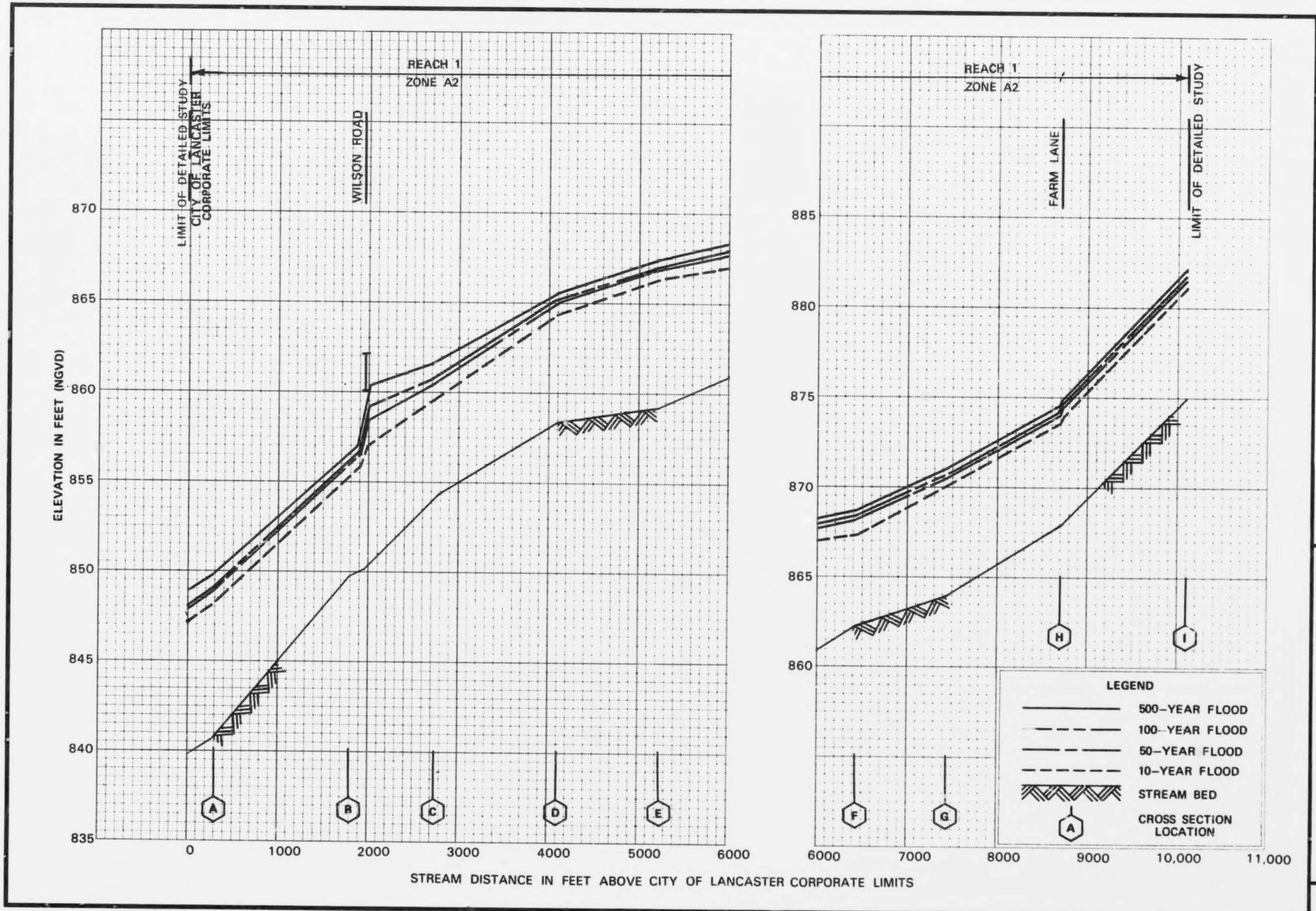
LATERAL C

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

64P

107



FLOOD PROFILES

LATERAL D

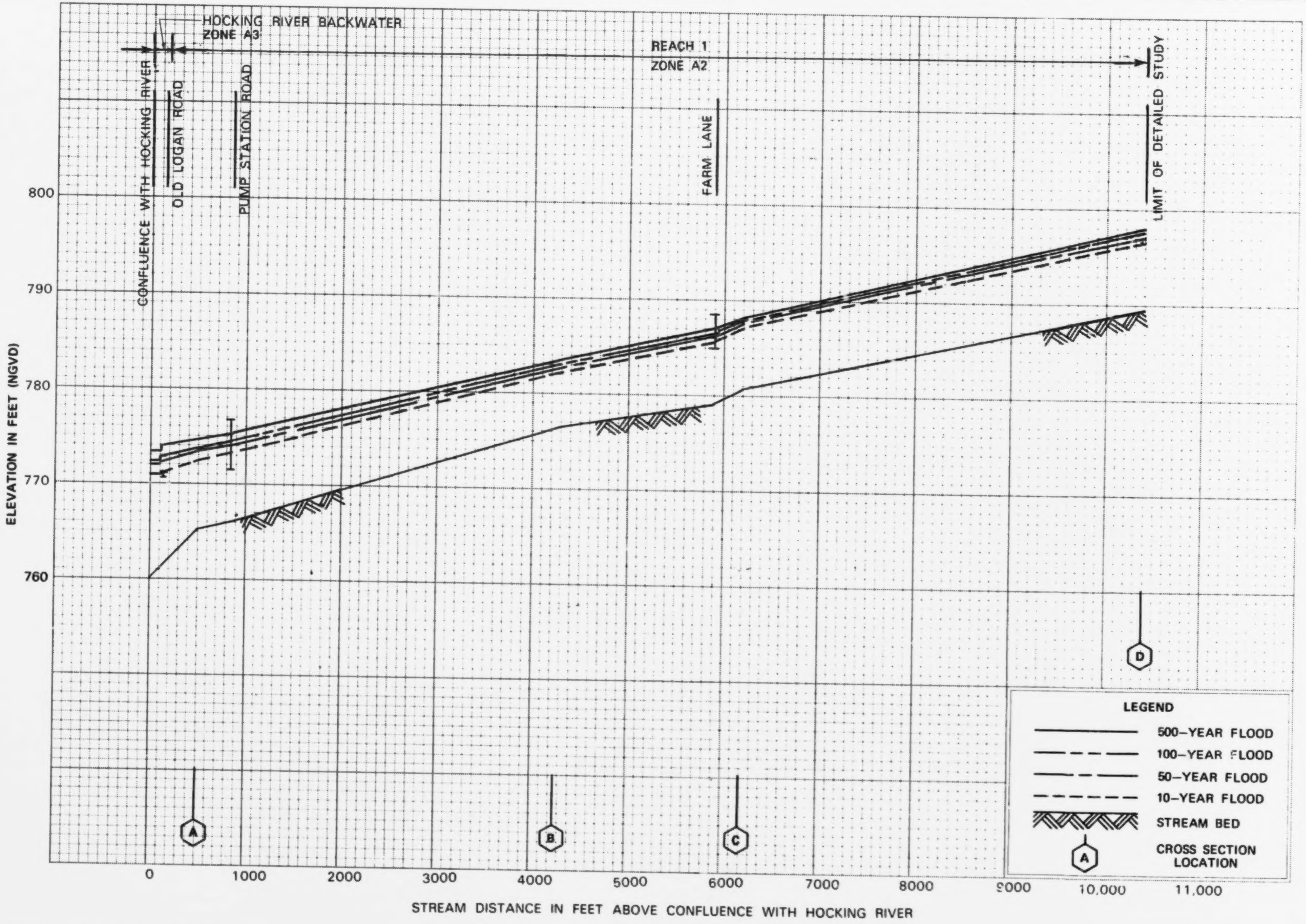
FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

(UNINCORPORATED AREAS)

65P

108



FLOOD PROFILES

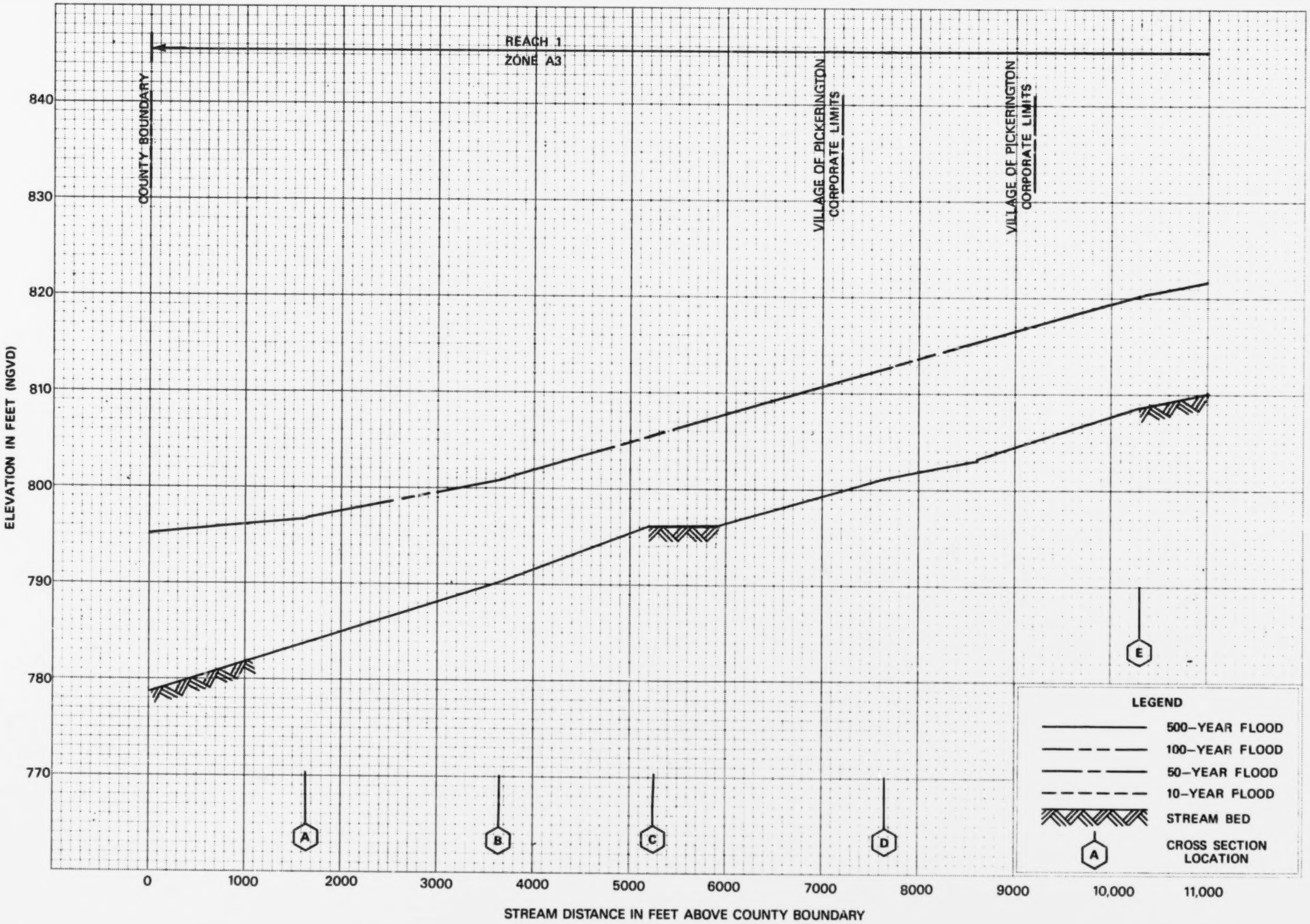
BLUE VALLEY LATERAL

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

66P

109



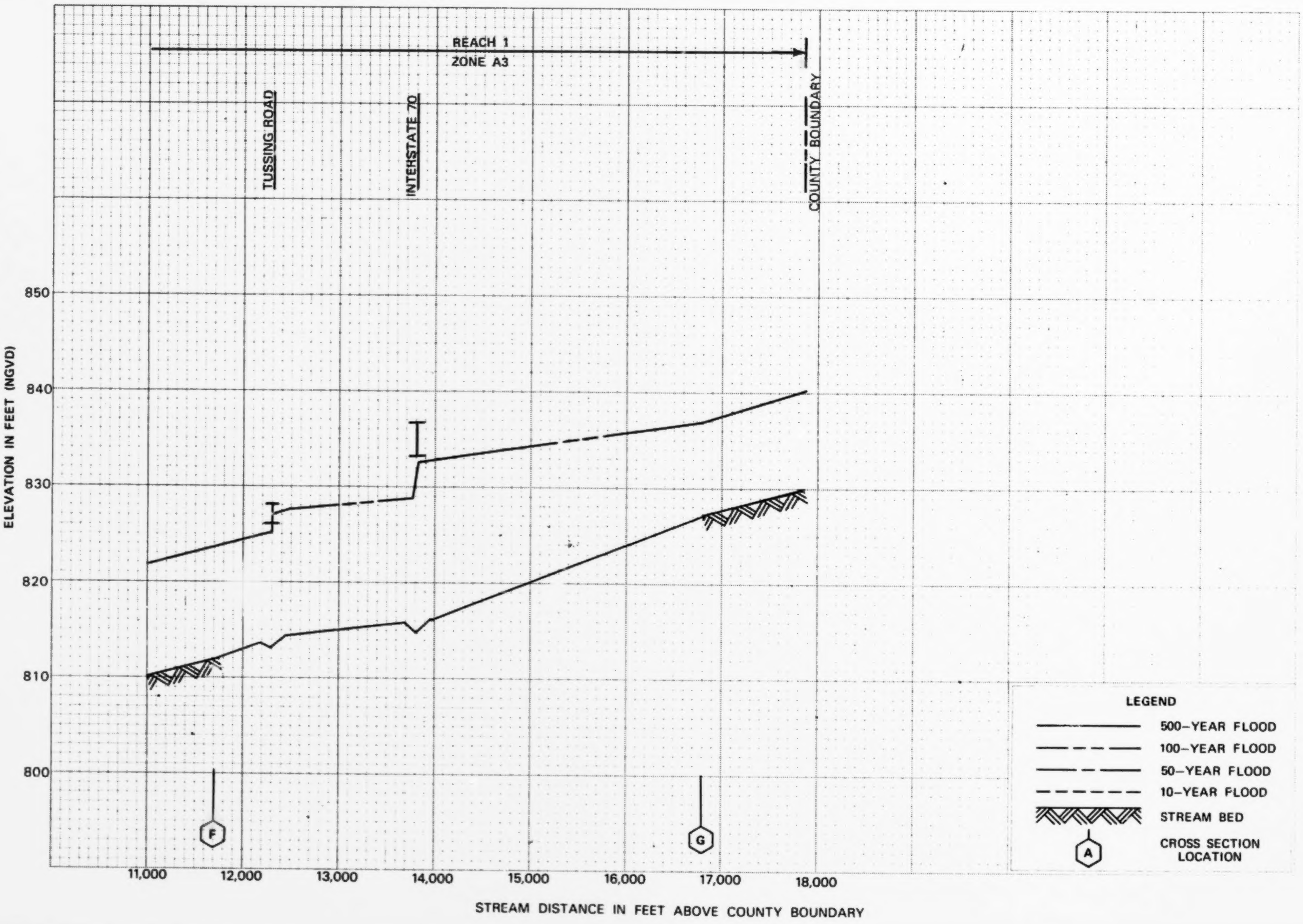
FLOOD PROFILES

BLACKLICK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)

11 0



FLOOD PROFILES

BLACKLICK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH
(UNINCORPORATED AREAS)